

227, 278-9

THE CANADIAN PRACTITIONER AND REVIEW.

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VOL. XXIV.

January to December, 1899

47964
1900

TORONTO:

THE CANADIAN PRACTITIONER AND REVIEW CO

1899.

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v. 24

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The Canadian Practitioner and Review.

VOL. XXV.

TORONTO, JANUARY, 1899.

No. 1.

Original Communications.

HIP DISEASE: ESPECIALLY A REVIEW OF ITS TREATMENT AND RESULTS.*

BY B. E. MCKENZIE, B.A., M.D.,

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The term "hip disease" has come to have a very definite signification as employed in the literature of surgery to-day. It signifies the pathological state resulting from invasion by the bacillus tuberculosis of the structures which enter into the formation of the hip-joint, and in this sense I shall employ the term.

The joint affection, in one sense, is nearly always secondary; *i.e.*, the virus, introduced elsewhere and present in the blood, has developed at the joint because it found there a nidus well suited to its growth—but in a still more important sense it is secondary. König found that in 79 per cent. of cases it was demonstrated that there was some focus of tubercular disease elsewhere before its manifestation in the joint.

Primarily only the cancellous bone and the synovial structures are infected. There is a general consensus of opinion that in children the disease commonly starts in the bone, while in adults the synovial membrane is more frequently its primary location. As in all other cases, the ultimate results must depend greatly upon early and accurate diagnosis. If minor affections in the vicinity of the hip, or if even the less serious affections of the joint itself be considered hip disease,

* Read before the Toronto Medical Society, December 15th, 1898.

then results will seem to be more satisfactory than those which may reasonably be expected.

CASE 1. A. C., girl, seven years. Her father, a physician, informed me that the child had been lame a couple of weeks. I found a temperature of 103°, fixation of femur on pelvis with marked flexion and adduction. Family history good. Child was very restless, and when taken from the bed would not put foot of the affected limb upon the floor. There was a history of a possible sprain. Father had made a diagnosis of hip disease, but in this I could not concur. A definite diagnosis was not made, considering the case one of either acute epiphysitis, bursitis, or a simple synovitis. A few weeks' rest in bed resulted in a complete and permanent restoration to health.

CASE 2. Albert P., six years, in good health until one month previously, when he had fallen from a lumber pile, but was not much hurt and went to school next day. Was lame and remained at home for the next four weeks, in bed during the last few days. When examined he was very irritable, had a temperature of 103°F., marked flexion and adduction of the femur. The attending physician had diagnosed hip disease, in which I concurred, and had a splint made and adjusted. Progress not being satisfactory, I saw the case again after two weeks, when examination under anesthesia revealed, lying above and nearly parallel with Poupart's ligament, a sausage-shaped swelling. Aspiration revealed the presence of pus, which was evacuated by entering behind and below the peritoneum. Recovery rapid and complete.

Seeing that in hip disease the joint tissues are invaded by a virus which tends to destroy them, which is never simply local but also has a nidus elsewhere in the system, the plan of campaign suggested in resisting its ravages is to call to our aid forces both local and general.

Nearly twenty years ago two important steps forward in the science of medicine were made, which supplied a marked stimulus to the operative surgery of joints, viz., the practice of asepticism and the discovery of the bacillus tuberculosis. It is not surprising that, encouraged by these victories, some went to extremes in availing themselves of the security afforded in operative work. An instance of this is seen in the teaching of Barker in his Hunterian lectures in 1887. He made claims so strongly in favor of early operation, resulting in speedy cures, that everywhere there were found surgeons who believed, and who acted on the belief, that as soon as a diagnosis could be made excision of the joint should be performed, thereby removing the femoral head and all diseased tissue and cutting short the course of the disease, forgetting for the moment that they were very rarely able to eradicate all diseased structures

Hence it may fairly be said, without prejudice, that the fulfilment of the fair promises held out by the distinctively operative treatment were not realized.

Immediate healing often occurred, and these cases were sent home sometimes in a month or less, with the operation wound closed.

Compared with the old discharging sinuses which continued to discharge for months or years, this was apparently a most satisfactory and gratifying result, and calculated to beget a hope that, by operative measures alone, these cases could be cured in a short time.

Further observation showed recurrence of the disease in a large proportion of the cases, and that other ills followed, consequent upon this treatment. Even under the most careful management, untoward results, even death, sometimes followed as the direct consequence of the operation. In the cases which took the most favorable course possible, it was found that excision of the femoral head in itself is a cause of no slight disability. In a considerable portion of the cases, the focus of disease at the hip was not the only one in the body, and tuberculosis manifested itself elsewhere. In still other cases the large extent of fresh surface exposed became a menace, because it served for the ready absorption of the tubercular virus.

There are serious hindrances to the successful accomplishment of this purpose. One of the epiphyses, the one most frequently invaded, primarily is so situated as to be entirely within the joint. Its removal calls for an excision which in all cases greatly invalidates the joint function, and permits the limb to slide upward, thus becoming insecure for the purpose of weight bearing.

If the primary focus be in the floor of the acetabulum, as it is in a considerable proportion of cases, it cannot be reached without excision.

Should the primary focus be found at an early date at either of the trochanters or in the synovial membrane, there is a better prospect of its removal without serious interference with the integrity of the joint.

Such definiteness of diagnosis is, however, at present, impossible. An early diagnosis can be made, but to determine the exact location of the primary focus is impossible. Exploratory incision will not help us, because at an early period the disease is hidden in the interior of the bone or in the floor of the acetabulum.

Early operation has been warmly and extensively advocated. During the years 1879-87, Volkmann in his clinic at Halle made many early excisions, but gave up the practice in the latter year as results were not satisfactory. Dr. Geo. A. Wright,

4 HIP DISEASE: TREATMENT AND RESULTS.

of Manchester, who had treated more than five hundred cases in the six years previous to 1887, and had performed several hundred excisions, says at a later time: "If the cases be taken in time the best results are obtained by rest." In order to afford reasonable hope for eradicating the disease one must cut wide of the affected part and well into sound tissue. This opens up new avenues for reinfection, a fact which experience shows we cannot afford to disregard.

Weighing all the evidence in the case, and giving due weight to facts, the writer is of the opinion that operative interference is seldom justifiable before such time as the breaking down of tissue may be diagnosed.

At this time an opening should be made sufficiently free to enable the surgeon to remove all debris without needless traumatism. In this way not only liquefied and caseous tubercular detritus may be removed, but sometimes a sequestrum is found. It is probably better not to attempt to close the wound but to pack, using iodoform freely, and observing the rules of asepticism.

The loss of the femoral head, whether through operation or the destructive processes of the disease, must be regarded as one of the most undesirable results. In this case the shaft of the femur slides upward, and marked shortening results; but, what is more serious, the end of the femur seldom secures firm anchorage, and when the weight of the body comes upon the limb, the adjustment between the femur and the pelvis is found ill-suited to weight-bearing, so that the lack of fixation causes a very marked limp, the patient soon grows weary, and pressure of the femur upward into tissues not designed to resist such intrusion, causes pain. True it is that, in a proportion of these cases, the upper end of the femur finds a firmer anchorage, and much of disability is thereby overcome.

Shortening of the limb, if it be less than two inches, need not be considered a serious matter. The employment of cork under the boot will readily supply the lack.

Over against these results, obtained by early operations, we may, for purposes of comparison, place those obtained by less radical methods. Previous to the time of antiseptic surgery, the opening of a cold abscess was generally followed by a hectic condition, which slowly but often surely dragged the patient down to the grave. Through the precautions of modern surgery a mixed infection is prevented when these are opened, and not infrequently closure of the abscess cavity is secured.

The indications for mechanical treatment are the same whether we operate or not. Of the various agencies under the surgeon's control, and for the effectiveness of which he should be held responsible, that which is commonly managed with least efficiency is the splint or brace.

As soon as a diagnosis is made, most complete rest should be secured for the affected hip-joint. If deformity exist, it should first be corrected. If the diagnosis be made early, before there is much destruction of tissue, there is generally but little deformity. That which most demands attention at this stage is flexion of the femur upon the pelvis; and it can most conveniently and advantageously be corrected by placing the patient in bed for a few weeks, securing him by a Liston's splint applied on the sound side, and fastened to the bed, while a weight pulls on the affected limb, gradually reducing the deformity. A good hip-splint should fulfil at least two indications. (1) It should effect most complete fixation for the diseased joint, while allowing the patient as much freedom in every other way as is consistent with the attainment of this result. (2) It should prevent the occurrence of deformity. The splint here shown fulfils these indications better than any other known to the writer. It is a modification of the splint long ago designed by the late Hugh Owen Thomas. It consists of a bar of iron made to fit the inequalities of the body and the affected limb, extending from the inferior angle of the scapula over the buttock and back of the thigh and leg to the lower part of the calf, ending here in a bifid portion, which is carried downward below the foot and secured to the body by two bands, the one passing around the thorax and the other about the pelvis, and fastened snugly to the limb by straps or bandages. The bifid portion terminates in a cross-bar joining the two divisions of the fork, which serves as a fixed point from which extension can be made. The lower band is made sufficiently heavy and resisting to bear the strain of one or two straps passing from front to rear under the perineum by which counter extension is made. This lower forked piece is made adjustable so that the splint may be lengthened as the patient grows. The whole is carefully padded and covered with leather, except from the knee downward. The efficacy of the splint and the comfort of the wearer will depend much upon the exactness of the fit which is obtained.

The splint, made somewhat as above described, is frequently employed as a crutch, the patient stepping alternately upon a boot having a high cork sole worn on the sound limb, and upon the end of the splint carried downward below the foot, so as to correspond to the high sole worn on the sound side. This use of the splint is not to be commended, as it induces too free use of the diseased limb. It is better that the patient walk by the aid of crutches, allowing the affected extremity to hang inactive.

The ambulatory treatment has been much abused by advising that the patient should move about as much as possible. The

amount of exercise obtained by the patient does not do much to keep up his muscular development, nor does it greatly aid in the metabolic processes, while the erect position long maintained does produce harmful results, by favoring swelling of the inactive limb. The patient's ability to move about at will is not to be lightly esteemed; it has many advantages for himself and for others. Much of his time, however, should be spent in the recumbent position, either out of doors or in a sunny room. If the splint be well adjusted he soon learns to help himself, and can move from place to place without help, and without danger of injury to the diseased joint.

The teaching of the last few years should not be forgotten nor lightly passed over by the surgeon who is called upon to deal with tubercular joint disease. Pulmonary tuberculosis is to-day considered curable in a large percentage of cases. The most important points in securing efficacy of treatment in this domain are: (1) Early diagnosis; (2) free and constant exposure to pure air; (3) as much sunshine as possible; (4) dry air of high altitudes; (5) good nutrition; (6) as much rest as possible for the affected parts; and (7) measures of prophylaxis.

Evidence, not only in the sphere of surgery, but in that of general medicine, is accumulating and showing more and more clearly that it is by attention to the general disease which is present rather than to its local removal by operative interference that we must look for the best results.

In regard to constitutional treatment, the same directions should be given as in other forms of tuberculosis.

Under such treatment a large proportion of cases will progress constantly toward recovery. If, however, the amount of inflammatory product be more than nature can successfully dispose of by absorption, and if the healthy tissues do not become successfully walled off from the diseased structures, and the virus continue to extend the area of its noxious influence, so that breaking down occurs, then the debris should be removed by operation, the surrounding tissues being wounded as little as possible, trusting largely to natural processes aided by drainage, cleanliness in nursing and good diet to put a stop to the further ravages of the disease and to secure cicatrization.

It is interesting to inquire what are the elements which constitute a successful recovery, and what those which prove a detriment and disability to the patient.

Shortening, of course, may be apparent or real. Real shortening results from (1) displacement upward of the femur through loss of any portion of the head; (2) through lack of growth, so that the diseased limb does not keep pace with its fellow. Apparent shortening results from flexion or adduction,

or from both. This latter form is a serious disability, and cannot be successfully remedied by placing cork under the affected limb.

Marked adduction or flexion as a permanent result is a cause of much disability. If these occur while the disease is still active, then they should be corrected by traction, while the patient is confined to bed, and the corrected position may be maintained by a good splint till recovery results.

If after nature has done her part, and the disease is quiescent, there still be found adduction and marked flexion with ankylosis, indicating that the surgeon has failed in doing his part, then osteotomy must be resorted to. In properly selected cases this is a most satisfactory operation, both in its performance and results.

If with ankylosis there be no adduction, and only a moderate degree of flexion, correction is not called for, as flexion not exceeding twenty degrees is to be considered desirable, as it makes sitting down more comfortable and graceful.

Ankylosis is a desirable result if there be such a loss of bone as to deprive the natural joint of its security, for the purpose of weight-bearing. In any part of the body ankylosis is better than a weak movable joint, except it be in the joints of the upper extremity.

The splint above described is a most desirable one for children, but owing to the fact that its upper part comes to the axillæ, and that it absolutely prohibits the sitting position, and also because that deformity is not so apt to occur in the adult, a splint much like those so much used in the United States may wisely be employed. It may be called a traction splint, whereas the former one is pre-eminently a fixation splint. By the English splint, however, as modified, powerful traction may be obtained, and the American splint secures some degree of fixation. This traction splint consists of a horseshoe-shaped and well-padded pelvic band passing from the diseased side in front and behind the pelvis, and having the opening toward the sound side. Bolted to this band near the centre is a bar which reaches down to a point two or three inches below the foot, or better, reaches as far as the bottom of the foot, and there has a piece at right angles, which passes through a tube in the heel of the boot. One or two perineal straps, placed as in the former splint, serve to force the splint downward, while its attachment to the boot makes traction upon the leg. A high-soled boot should be worn on the sound side, and the patient should walk with crutches, never allowing the foot on the affected side to reach the ground.

In making counter extension by means of the perineal straps, the one pulling upward on the side of the pelvis opposite to

the diseased joint is the more important, and should be rendered the more effective. When only one is employed, this is the one to use. The reason for this is found in the constant tendency of every case of hip disease to terminate in adduction, a deformity that is so objectionable and disabling. By effecting strong counter extension on the sound side of the pelvis while powerful extension of the diseased limb is being maintained, the adduction may soon be corrected.

Not infrequently disaster follows the too early removal of the splint. The very great disposition of nearly every case of hip disease to adduction of the affected limb as convalescence advances does not receive the recognition it deserves. Though the disease may have been long quiescent, yet sometimes adduction continues to increase, and the too early removal of the splint has been known to permit of as much as two inches of needless shortening, with the accompanying secondary curvature of the spine.

Of the hip cases that have come directly under my care during the ten years, 1889-98, and who have advanced to a stage where treatment, because of the activity of the disease, has ceased, I have been able to trace and to obtain fairly reliable records of sixty-nine. Of this number, eight are dead, as follows:

One, a boy of sixteen, had Pott's disease and hip disease, and died of general tuberculosis.

One, a girl of fourteen, who had Pott's disease and hip disease, died of general tuberculosis.

One, a girl of fifteen, had had discharging sinuses for a long time, and died of amyloid disease.

One girl of fourteen had pulmonary tuberculosis, with cavities when first seen.

One man of thirty-four died, two years after recovery from the hip disease, suddenly of some obscure affection.

One boy of sixteen died from typhoid fever two years after recovery from the hip disease.

One boy of eight died of tubercular meningitis, though for several months previously he seemed to be convalescing satisfactorily.

One girl of sixteen died of general tuberculosis with dropsy.

All of these eight cases had suppurated abundantly, and six of the number had manifested signs of the disease for a long time, without having any efficient treatment.

Thirty-six of this number had suppuration. Of those that suppurated, twenty-one made a good recovery; *i. e.*, recovered without deformity, with less than one and a half inches of shortening, and without a marked limp. Of this number, three have recovered without a limp.

Of the whole number of cases, five have recovered without limp, and five others with but a slight limp.

The oldest patient was fifty-eight years of age. Seven patients seen during these years were over twenty years of age, two of the number being each forty and two over fifty years.

Permit me to summarize:

1. Hip disease is a local manifestation of a constitutional disease.

2. Early operative interference is seldom justifiable.

3. As soon as softening can be determined, the surgeon should operate and obey indications, observing all care not to injure needlessly the mechanical integrity of the joint, and knowing that he is but aiding nature by removing tissue which she has already cast off.

4. In the future management of the wound, the principles of asepticism and antisepticism must be carefully observed.

5. From the earliest moment, efficient protection for the joint should be secured and constantly maintained by a well-fitting mechanical appliance.

6. Constitutional treatment is indicated as in other tubercular affections. Great emphasis should be laid on obtaining the freest exposure to sunlight and fresh air.

7. After excision a perfect recovery is never effected, the mechanical integrity of the joint having been interfered with.

8. Following mechanical and constitutional treatment, perfect restoration of function is sometimes obtained.

9. Even when softening of tissue occurs, and necessitates incision, there is sometimes a perfect restoration, and frequently a highly useful return of joint function.

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MANAGEMENT OF DIFFICULT BREECH LABORS.*

BY ADAM H. WRIGHT, B.A., M.D.,
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The dangers to the child in breech labors are fairly well known, but not always duly appreciated. In the most skilled hands probably 10 per cent. of the children are still-born; in some charities, we are told by Herman, 30 per cent. perish during delivery. In other words the excess in the mortality rate depending on want of skill in management sometimes amounts to 20 per cent. This is certainly a very serious matter, and is far from creditable to our modern school of obstetricians. My own experience and observation lead me to believe that many physicians neglect to use proper and systematic methods in the management of these cases. Fortunately, it happens that it is not difficult to acquire a reasonable amount of skill if we adopt certain rules in assisting delivery in breech cases. I have not time, nor any desire, to refer to all the methods which have been described by distinguished obstetricians in various parts of the world, but will endeavor to outline a definite plan of action having reference especially to the safety of the child, and for the sake of brevity will speak in rather a dogmatic way. It is generally better to explain to the friends the nature of the case and the extra risk to the child.

Position of the Patient.—Place her on her back across the bed, with buttocks at the edge of the bed, in the lithotomy or Walcher's position. As a general rule I greatly prefer the dorsal position for obstetrical operations, such as forceps delivery, version, etc.; but especially do I like it in breech labors. I think it equally important that the patient should be placed across the bed, and I thoroughly endorse Dürhssen's remark that "in this way alone can proper assistance be rendered." Do this in multipara when the breech enters the vagina, in primipara when it is on the point of delivery (Dürhssen).

Preparation of Physician.—Make bare both arms up to shoulders or as nearly so as possible, and cleanse hands and arms thoroughly. The accoucheur should be prepared to pass either hand into the vagina or uterus as speedily as possible. A 1 per cent. solution of lysol is probably the best for rinsing purposes during the manipulations.

Management of Delivery.—Avoid traction on the child, if possible, because it generally causes extension of arms over the head, and frequently extension of the head itself. Before the expulsion of the breech instruct the nurse how to press on the

* Read at the meeting of the Ontario Medical Association, June, 1898.

fundus uteri, when required, to assist in expelling the thorax and shoulders, and how to press on the head after the shoulders are born. After the delivery of the breech give the signal for patient to bear down and nurse to press on fundus. When breech does not descend into pelvis within an hour or two after the os is fully dilated, traction becomes necessary.

Bring Down a Leg.—Better to have patient anesthetized before all the liquor amnii has escaped. Pass up the hand with its palm towards the child's abdomen. Support the uterus with other hand over fundus externally. Seize the anterior foot if possible. "By it we can more easily pull the child downward and backward through the superior strait." When legs are extended on thighs so that feet are close to head, pass the hand to the fundus. When you reach the knee press it outward, then push the hand further, and seize the instep or foot, and carry it to the other side and bring it down.

When interference becomes necessary after the breech has descended into pelvis, it is better even then to pass up the hand and bring down a foot; but full anesthetization is desirable, and great gentleness and caution are necessary.

With reference to other methods I have but little to say. Digital traction with index finger hooked into groin, or traction with the soft fillet is sometimes sufficient, and either is quite satisfactory. The blunt hook is dangerous. The forceps is also dangerous and generally useless.

When the child is born as far as umbilicus, pass the finger into the vagina and pull down a loop of cord, but do not waste any time in trying to guide the cord to any particular part of the pelvis, as is generally recommended.

Place a piece of flannel or small blanket or diaper (sterilized) round the exposed part of the child to prevent respiratory efforts which may be induced by contact with the cold air.

Liberation of Arms.—The arms are nearly always dragged over the head when traction has been employed.

When the shoulders appear at vulva pass two fingers along the most easily accessible arm to the bend of the elbow, push it backward and bring it across the face to the vulva, first the elbow, then the arm, then the hand. Bring other arm down similarly. Be careful not to press on humerus for fear of causing fracture.

When the shoulders are arrested at the superior strait, an entirely different method is advisable.

Press the body of the child slightly upward and rotate sufficiently to bring the back to one or the other side of mother's pelvis; then elevate the hips toward mother's abdomen, using moderate traction, and try to liberate the posterior arm. Use the hand that naturally faces abdomen of

child and introduce until two fingers reach *elbow*. Draw arm across the child's face and then downward. Then bring hips downward and make traction on thighs as there may now be room for the head and remaining arm to emerge. If not, push child backward into pelvis and rotate the body, so that the arm that was anterior becomes posterior. During this rotation the back of the child should sweep across the front of the mother's pelvis. Bring down the second arm as before with the other hand.

During rotation be careful not to dislocate the atlas upon the axis if child be alive; but if the thorax has been pushed upward in such a way as to free the head from the superior strait, this danger is avoided.

Nuchal or Dorsal Displacement of Arm.—Very rarely the arm is extended by the side of the head, and is bent at elbow, so that the forearm lies behind the neck.

Treatment.—Place child's body downward and pass fingers along the back behind symphysis, seize the elbow, and then sweep the arm outward and over fetal face. Or rotate the fetal body in a direction opposite to that which produced the displacement. It may sometimes be necessary to fracture the arm.

Delivery of the Aftercoming Head.—In no case should the head be allowed to remain in the vagina after the delivery of the shoulders one moment longer than actually necessary. The uterine contractions have now little or no expelling force, while pressure on the cord and premature attempts at respiration at this stage are especially dangerous to the child. I employ the following methods in the order named:

1. *The Prague Method.*—Grasp the ankles with the right hand and place the left hand over the shoulders with the thumb and index finger on one side of the neck and three fingers on the other side. Pull downward and backward until head has entered the pelvis and then upward and forward, bringing the back of the child nearer to the mother's abdomen, as the face, chin first, slips over the perineum. I use the terms right and left hands for the sake of convenience. The choice of hand for each portion of the manipulation may be left to the operator. In this method the force is expended on the child's neck, and if too great, might cause dislocation or even decapitation.

In the majority of cases delivery is accomplished simply and quickly by this method, but in difficult cases where much force is required I adopt the Veit-Smellie method. I may add that British obstetricians, as a rule, consider that the Prague method should be employed only when the head is in the pelvis.

2. *The Veit-Smellie Method.*—Leave the left hand in its position over the nape of neck. Place the right arm so that

the abdomen of the child lies upon it straddle-wise. Introduce fingers, with hand, if necessary, into vagina and one or two fingers into the mouth, and pull downward on the jaw to flex head, if possible, and then apply traction to both jaw and shoulder. Matthews Duncan demonstrated that fifty-six pounds might be applied in some cases by dragging the lower jaw without appreciably injuring the parts. Let your assistant or nurse take the legs of child in one hand, and hold child as far forward as you consider necessary while she still presses over fundus with other hand.

3. *Modified Veit-Smellie Method.*—Smellie first pulled on the lower jaw as described in No. 2, but when he was afraid of overstraining it, he modified the method as follows: Remove fingers of right hand from mouth, and apply them over the superior maxillary bones on either side of nose. Pull face downward, while fingers of left hand push occiput toward the hollow of sacrum. Then employ traction. If you find that you have flexed the head to any extent, place the hands as in second method and pull. The chief advantage connected with this method is the production of flexion which was formerly insufficient to allow easy delivery. It is not likely that jaw traction does much in the way of aiding flexion, but it certainly tends to prevent extension, as Herman expresses it. When we pull, the pressure of the brim presses the parietal bones together and thus makes the vertex more pointed, while it lessens the transverse diameter. Pressure from above may prevent this moulding of head, and in some cases it is better to remove this pressure after it has been applied for some time.

4. *Application of Forceps.*—When other means have failed we may extract with forceps. Formerly this instrument was employed more frequently than now. The Smellie method is simpler and occupies much less time than the application of the forceps, while the power which may be used in the jaw and shoulder traction is, as a rule, quite as great as that which can be obtained with the forceps. This has been the experience during late years at the Rotunda in Dublin. However, it is well to have the forceps disinfected and at hand in all cases of breech labors so that it may be used if necessary. The axis traction is best. The blades should be introduced and the handles locked under the body of the child, which should be held forward by an assistant, and traction should be applied on the axis of the pelvis.

5. *Perforation.*—If forceps traction, employed for a reasonable time, fails, and the child is dead, consider the further possibility of damage to the soft parts of the mother, and use the perforator. This is seldom necessary unless there be some deformity of the head, especially hydrocephalus.

OBSERVATIONS ON MONOCULAR DIPLOPIA AND POLYOPIA.*

BY G. STERLING RYERSON, M.D., C.M., L.R.C.S. EDIN.,
Professor of Ophthalmology and Otology in Trinity Medical College, Toronto.

Can one see double with one eye? This is a question which students sometimes ask, and it was not until my attention was thus drawn to it that I learned how really common is this condition of monocular diplopia. Another question often asked is, If a man can see double with one eye, can not he see three or more images with both? In some cases he can, as in segmentation of the lens, but generally he cannot see more than double.

For purposes of description cases of monocular diplopia may be divided into three classes: (1) Those dependent upon errors or diseases of the refractive media; (2) Those caused by diseases or injuries of ciliary body or iris; (3) Those dependent upon disorders of the central nervous system or of the nervous apparatus of the eye.

1. Of the first class, refractive errors and diseases of the lens and cornea, astigmatism, more especially irregular astigmatism, is an important cause. Opacities of and facets on the cornea similarly cause diplopia. Growths and connective tissue bands in the vitreous and segmentation of the lens are other causes. I had a patient with segmentation of the lens, who could see five moons with one eye. He saw singly with the other. Traumatic or congenital dislocation of the lens is always attended by monocular diplopia.

2. Blows upon the eye, resulting in partial rupture of the zonula of Zinn or partial paralysis of some portion of the ciliary muscle, causing irregular contraction, also produce diplopia. Other causes are trauma of the iris with peripheral detachment (iridodialysis), or following badly performed operations or synechiæ after iritis. Persistent pupillary membrane does not cause diplopia, probably because the mind has unconsciously been trained to ignore the double image by long usage.

3. The third section of my subject is best illustrated by the relation of the following cases in which monocular diplopia was dependent upon nerve disturbances:

(1) A lady, unmarried, aged about thirty, has for years suffered from right-sided facial neuralgia. A year ago she noticed that there was tinnitus and a certain confusion in hearing in the right ear, attended by abnormal acuteness, so that ordinary

* Read at the Quebec meeting of the Canadian Medical Association, 1898

sounds were unpleasantly loud and loud noises painfully so. She also heard double on this side—that is, she had an echo of her own voice or other sounds. She had at the same time pain in the right side of nose, quite severe at times, attended by a feeling of strong contraction. She shortly afterwards noticed that she could see double. Investigations of this latter revealed the fact that the double vision was confined to the right eye. The double image overlapped, and according to her statement, seemed in front of rather than to one side of the real image. She had a small degree of hyperopic astigmatism. This was corrected under hemetropia. There was also right-sided contraction of the field of vision. She was put on bromide of potassium and valerian. This treatment was followed by considerable improvement, but when I last saw her, a month ago, the symptoms were still persistent though in a lesser degree.

(2) My second case was that of a man, referred to me by Dr. Williams, of Ingersoll, who had met with a severe injury to the left side of his head six years ago. The injury was followed by unconsciousness lasting several days. He could not see as well with either eye afterwards, but noticed especially that his right eye was defective. Last May, following a heavy day's work on his farm, he began to see double. Examination showed that the diplopia was monocular (right eye). Ophthalmoscopic examination showed both optic nerves to be pale, with a certain indistinctness about the margin of the right disc.

So far as the causation is concerned, it can be said to depend on lesion of the base of the brain. The cause is usually inflammatory, but sometimes traumatic. It is not, however, easy to be certain as to the exact location, because basal and nuclear disease have identical symptoms. Moreover, the combinations of nerves are almost countless. A discussion of them would hardly be profitable, surrounded as the subject is with uncertainty.

It might properly be added that this subject has received but scant attention from medical writers. The majority of textbooks either ignore it altogether or dismiss it with a line. I believe monocular diplopia to be more common in neurotic cases than is generally supposed. The subject is deserving of study.

EYE-STRAIN.

BY W. E. HAMILL, M.D., TORONTO.

Every organ in the body requires a certain amount of nerve force in order that the functions of the organ should be properly carried on, and if the nerve stimulus is interfered with or withdrawn from any organ, it results in erratic and disordered functioning of this organ, causing more or less disturbance in the whole body.

Now, the brain is the great central storehouse from which each organ in perfect health can, and does, make just demands as its needs require, in order that it may carry on its work harmoniously and in accordance with the laws of nature physiologically. There is always enough pent-up energy in the brain to furnish the needs of all the organs of a healthy body for a reasonable number of hours every day.

The demands thus made upon the brain during the active working hours of the different organs deplete the supply of brain electricity, more or less, but which is replenished again by "Nature's sweet restorer, balmy sleep." The supply of nervous force in the brain is limited, and if from any cause a greater demand is made by any organ, it robs some other or all the other organs of their fair share of nervous innervation, producing in the organs thus pauperized more or less disturbance of their natural functions. Any surplus nerve force drawn away by one organ leaves just so much less for some or all others. If we have a storage battery in the garret, which rings our door bells, lights our houses, runs the sewing machine, heats our rooms, etc., it is evident the battery would become exhausted if some tramp continuously rang the door bell, although the house might be, as it were, asleep, while the family were having a summer holiday. No unnecessary drain should be made upon the brain (battery), either awake or asleep, if a sufficient supply is to be forthcoming for the different needs as they occur.

Of course, the battery would the sooner become exhausted by leaving the lights turned on than by the ringing of the door bell, but in either case the electricity is being used up. Now, it so happens anatomically, that the eye is connected by numerous nerves (wires) with the brain (battery), and in every act of vision, "fixing" of the sight, and movement of the eye-balls, there is a supply of innervation (electricity) needed and used up, and as the eyes during our waking hours are constantly

receiving images and moving in different directions, it is plain an immense supply of nerve force is required by them every day.

The brain is quite equal to the demand, however, in the emmetropic and orthophoric eye; but supposing either ametropia or heterophoria exists, then a disturbance of the nervous equilibrium of the whole body is continuously produced, with the result that from the greater demands of the ametropic or heterophoric eye some organ of the body is likely to suffer, and hence we are not surprised to see stomach, intestinal, heart, lung, ovarian and such like troubles disappear, like dew in the morning sunshine, when the equilibrium is again restored by means of spectacles, or prisms, and the writer has seen frequent cases of obstinate dyspepsia, constipation, palpitation, asthma, epilepsy, etc., cured entirely simply by means of a proper pair of spectacles: thus allowing nature her own sweet will. Headaches are especially due to "eye-strain," and we are safe in assuming that eighty per cent. of all chronic headaches are due to some form of eye trouble, requiring glasses as the remedy, and yet how frequently the family physician, to whom these sufferers first appeal for relief, dose them with all sorts of medicine in the hope of obtaining some specific for the victim. Surely the time has arrived when every physician should recognize that persistent, oft-repeated headache should be the torchlight to pilot the patient to an oculist, instead of giving them medicine, which is not only usually inefficacious, but absolutely pernicious.

The brain in its relation to the muscles of the eye may be likened to a person driving a horse; the reins in the hands of the driver guide the animal perfectly when tractable and responsive, with scarcely a conscious effort on the part of the driver, their destination and intent being reached with a feeling of satisfaction and pleasure; but were the horse fractious and difficult of management, the driver would soon become nervous, irritable, perhaps explosive. When the muscles (reins) of the eye are too short or too long, too weak or too strong; or when the demands of the eye (horse) are unusual or irregular, the brain (driver) becomes irritated, agitated, exhausted, producing headache. The simile may be verdant, but it is apt.

Clinical Notes.

CASES IN PRACTICE.*

BY JAMES E. GRAHAM, M.D.,
Professor of Medicine Toronto University.

A Case of Mucous Colitis.

Ward 4, Toronto General Hospital. September 26th, 1898.

History.—J. W. S., male, aged 42, married. Complained of loss of weight and strength during the last four months; inability to stand the slightest degree of cold; severe pain in the abdomen radiating from a fixed point in the median line, 4 cm. above the umbilicus, at which point the pain was most intense; excessive flatulence at times which greatly increased the pain; obstinate constipation accompanied by painful defecation and the occasional passage of mucous material mixed with blood; the pain would be greatly relieved by free purgation and by the passage of gas; poor appetite and general symptoms of dyspepsia. This pain and constipation had troubled him four times during the last four years with intervals of varying duration between the attacks when he would be free from pain but would still complain of constipation.

Two aunts and one cousin died of carcinoma of the breast. Family history otherwise negative.

Always was a hard worker. Drank moderately but was a heavy smoker. Denied venereal infection. In 1893 suffered a heavy financial loss and was very despondent for over a year. Appetite generally good but was poor during each of the attacks of abdominal pain. In 1882 a heavy timber fell across his abdomen causing great weakness of the legs for four months, during two of which he was confined to bed. Typhoid fever ten years ago. In 1894, after a severe attack of "la grippe," he was troubled for the first time with the abdominal pain and constipation accompanied by such symptoms of gastric trouble as furred tongue, bad taste in the mouth, flatulence, some vomiting and sometimes pain about two hours after taking food. This first attack lasted two months. The second attack occurred in 1896 and lasted four months. It was similar to the

* Toronto Clinical Society.

first. The third came in January, 1898, and lasted until February and was soon followed by the fourth attack, which began May, 1898, and lasted until he came under observation at the hospital. The fourth attack was the most severe of all, and was accompanied by marked symptoms of gastric disturbance. In June he first noticed the passage of mucous material per rectum and after that time he observed it quite frequently. Early in September he passed several large pieces mixed with blood and fibrin. The largest piece was $4\frac{1}{2}$ inches in length and formed an almost complete cast of the bowel. Microscopically it was a structureless membrane containing blood and fibrin. No traces of malignant growth were found. He entered the hospital September 26th, 1898. Physical examination was negative. The colon was inflated and showed that the point of severest pain was in the course of transverse colon. The treatment was directed towards securing free purgation. Large doses of magnesium sulphate and enemata of soap and water, oil, glycerine, and magnesium sulphate. The resulting looseness of the bowels relieved the pain considerably and he left the hospital October 17th.

The patient was seen two weeks after he left the hospital, when he stated that a few days after he went home he passed another mucous coat of the bowel about four inches in length. He has since been quite well.

(Reported by Mr. Tanner.)

A Case of Meningitis due to Primary Pneumococcus Infection.

Ward 24, Toronto General Hospital. October 27th, 1898.

History.—Harold H., aged 10. Family history not obtained. Always was a bright child. One year ago he fell off a ladder and received a fracture of the skull on the right side above the parietal eminence. Paralysis of the left arm and leg followed. The paralysis was complete for some months but afterwards there was a gradual improvement which was more marked in the leg than in the arm. For a month previous to his admission to the hospital he seemed nervous and fretful but this was attributed to grieving over the death of a near relative. He felt unwell on Sunday, October 23rd, but this condition was only temporary. On Wednesday he became rapidly prostrated and complained of severe pain in the head and back of the neck; severe and frequent vomiting. During Wednesday night a condition of muttering delirium set in and continued until his death. He was admitted to the hospital on Thursday, October 27th. Temperature, 97; pulse, 80; respirations, 22; unconscious; low muttering delirium; nutrition fair; cross-shaped scar, 4 inches by 2 inches, with long axis in antero-posterior

direction, just above right parietal eminence; head turned towards left side and moved with difficulty; right side of face depressed, left side prominent; eyes closed, pupils dilated, right larger than left; divergent strabismus; no apparent discharge from the ears; mouth open; tongue dry and rough; lips dry and caked; respirations irregular both in volume and in rhythm but respiratory system otherwise normal; heart sounds faint and pulse weak; abdominal organs apparently normal; bladder distended, contained eighteen ounces which were drawn off by catheter; urinary examination negative; left arm flexed at the elbow, fingers flexed; left forearm extended with difficulty; right arm flaccid; legs flaccid; no glandular enlargements; reflexes—eyes, no pupillary reaction to light, no corneal reflex; legs—knee jerk absent on right side, variable on left side, generally absent but occasionally exaggerated; plantar and cremasteric slight on both sides; ankle clonus not obtained; examination of eyes by ophthalmoscope, no optic neuritis, but such a condition might have been beginning; veins dilated. The diagnosis was cerebral inflammation in the neighborhood of the depressed skull or meningitis extending from the seat of injury. The head was shaved and prepared for trephining on October 28th, but the boy died at 3 a.m. that day. There was a gradual rise in the temperature and pulse up to the time of his death. His temperature was $99\frac{1}{2}$ at midnight and 101 at 3 a.m., while respirations were 8 per minute.

Autopsy.—The chief interest was in the brain and membranes. The scalp was strongly adherent to the skull over the scar and internally the dura mater was also adherent. The skull was larger than normal for a child of ten years, and the bone was very thin. There was no depression of the inner table, only a slight thickening and roughening. The dura mater was roughened and thickened immediately beneath the scar. Over the whole cortex on both sides and about the cerebellum and medulla the arachnoid mater and the pia mater were congested, edematous and thickly infiltrated with thick yellowish-white pus. There was no apparent destruction of brain tissue on the right side beneath the scar. Spinal cord was not examined. There were numerous sub-pericardial hemorrhages in the heart. The blood was dark and fluid. Lungs normal. Peyer's patches and the solitary follicles of the intestine somewhat enlarged.

Bacteriological Examinations.—In smears made at the autopsy from the pus and heart blood the pneumococcus was the only organism seen. Cultures from the pus and blood resulted in the growth of the same organism. The organisms in the smears were diplococci, encapsuled, and retained the stain when treated by Gram's method. Injection of the cultures into

the peritoneal cavity of a rabbit resulted in the animal's death after 48 hours with localized pus formation and organisms in the blood similar to those seen in the smears.

(Reported by Mr. Tanner.)

Staphylococcus Infection.

M. B., aged 34, bookkeeper, was first seen by me on October 24th, when the following history was given: The patient went to Chicago for his holidays and after spending two weeks in that city returned to the neighborhood of Hamilton where he visited his former home in the country. On Thursday, October 13th, he helped to pull up roots (mangel-wurzel) in the field, after which he complained of a pain and slight numbness of the left hand. His mother had previously noticed a peculiar restlessness and did not think he was well. On Saturday, October 15th, the pains and numbness became more pronounced. These symptoms together with loss of power increased until the following Wednesday, October 19th, when he went to his home in the northern part of Ontario. His wife met him at the station and did not think he was seriously ill. He complained of the pain and loss of power of the left arm. On Thursday he felt worse and a physician was called in. On Sunday he was noticeably weaker and his breathing became more rapid. He slept very little on Saturday or Sunday night. The pain was not severe but the patient was restless and walked about the room the greater part of the time. He came down to Toronto on Monday and was much fatigued by the journey.

At eight o'clock in the evening the patient was seen by the writer. He was in bed—face flushed, and although he replied intelligently to questions, a certain amount of heaviness was noticed. The conjunctivæ were congested and the pupils responded to light. The tongue was partially coated and the bare spots were quite red. The mucous membrane of the pharynx was red but there were no white patches to be seen.

The patient had great difficulty in swallowing and made gestures very similar to one suffering from quinsy. Swallowing did not give him pain but a strong effort was required to accomplish the act. His left arm was almost completely paralyzed, but he had some power over the shoulder muscles. He could use his right hand and arm fairly well, but complained of more or less pain and numbness in that extremity. He turned over in bed with great difficulty and paralysis of the muscles of respiration was then noticed. The respiration was 40 in the minute, and so shallow that it was difficult to hear any breathing sounds. The diaphragm was paralyzed to the same extent as the muscles of the chest walls. The heart

sounds were clear and the first sound had somewhat of a booming character. No bruits could be heard. The abdomen was slightly tympanitic. Bowels constipated. The lower extremities were weak but he had fair control, and with assistance had walked to his room in the second story that afternoon. Temp. 102; respiration 40; pulse 120, 9 30. At 10.30 I was hastily summoned and found the patient dead. The nurse stated that the same condition as has been described continued until a few seconds before death. She was about to give him a drink when he suddenly expired. The writer had intended to make a more accurate examination of the muscles, as to electrical reaction, etc., on the following morning.

At the autopsy the right lung was firmly adherent at the apex, posteriorly and to the diaphragm, there was slight adhesion of the left apex. The blood was very dark and fluid throughout the body. Heart muscles were flabby but of good color. The spleen was enlarged and very soft. The kidneys showed intense congestion, swollen cortex and a slightly adherent capsule. The liver was very soft and of a pale greyish color. The other organs apparently normal. On both sides of the brain the arachnoid and pia mater, from the fissure of Rolando back to the middle of the occipital lobe, were swollen and showed white edematous patches. The membranes came away from the brain matter readily. No pus in the white patches. Base of the brain, medulla, pons, and the upper inch of the spinal cord apparently normal. The rest of the spinal cord could not be examined unfortunately. The large nerve trunks in the left brachial plexus showed the pressure of many minute hemorrhages. On either side of the epiglottis there were enlarged lymphoid-looking patches varying in size from a pin's head to a bean. Cultures were made from the heart blood, spleen and kidney and a pure culture of the staphylococcus pyogenes aureus was obtained. These cultures produced localized abscesses in rabbits in 36 hours from which pure cultures of staphylococcus pyogenes aureus were obtained. No abscesses were found in any part of the body although a careful search was made. The appendix was quite healthy.

NOTES ON APPENDICITIS IN CHILDREN.

BY F. MARTIN, M.D., DUNDALE.

CASE 1.—William A., aged twelve years. On September 26th rode to town ten miles, walked into office in a semi-erect posture, face sallow, drawn and anxious. Had been constipated several days. Shooting pains in abdomen, temperature 102.8° , pulse 129, tenderness in right iliac fossa, very marked in McBurney's point. No tumor could be felt either externally or by rectum. Ordered "rest, opium, enemata," with hot applications in groin. Received favorable reports daily for ten days, when he commenced to strain a great deal at stool after the injections. On October 7th, a small tumor could be felt low down on the right side externally. On examination by rectum a lump about the size and shape of the bottom of an ordinary teacup could be felt a short finger's length above the sphincter. After exploring with a grooved needle this was freely opened through the rectum and at least a pint of very offensive liquid pus evacuated. From that date the patient was practically well.

CASE 2.—S. W., aged fourteen years. October 22nd, vomiting, pain in right groin, right thigh flexed, temperature 101.2° , pulse 110, tenderness and dulness over a sausage-shaped tumor in right iliac fossa. Same treatment as in Case 1. October 26th commenced to strain at stool after injections. A tumor resembling the bottom of a pepper bottle could be felt per rectum; exploring this on two successive days no pus could be found. The acute symptoms all subsided, and on the 31st, after an injection, considerable pus was passed by the bowel, which continued for several days, and an uninterrupted recovery was made.

CASE 3.—H. R., aged ten years, male. On October 29th took a chill, retained nothing in his stomach for twenty-four hours following. On 31st, when first seen, temperature 101.4° , pulse, 134, tongue furred, pain and tenderness in right fossa, no tumor found either externally or by rectum. On the next day a lump could be detected which steadily increased in size for three or four days until the lower limit could not be made out, and the upper was within a finger's breadth of the liver, dulness, when, notwithstanding the strong condemnatory paragraph by Treves, I explored it twice with a hypodermic needle with negative result. On the seventh day of his illness, feeling confident that pus was present, and the patient's life threatened, with the assistance of an older practitioner, I explored again, this time with a fair-sized aspirating needle under full

anesthesia, at the same time being prepared to operate. A very slight trace of pus being found, my consultant strongly advised against operation. His advice was followed, and the patient commenced to improve from that date, and at the present writing is comparatively well with the exception of pains in his limbs and vertigo at times.

CASE 4.—W. R., male, aged ten years. Took ill on Wednesday with pain in the bowels. On Saturday a distinct tumor could be seen in right iliac fossa, which subsided in a few days. On the following Tuesday (seven days after the onset) pus was obtained by a hypodermic needle passed through the sixth or seventh intercostal space in the right nipple line. Thinking the case clearly one of empyema a tube was inserted through one of the lower intercostal spaces at the back with a negative result. Without any marked change the patient lingered, and died in the seventh week of his illness. I saw the case in consultation late in the course of the disease, and considered it one of hepatic abscess.

At the post-mortem the appendix was found to be completely obliterated, the cecum and neighboring bowel gangrenous so that they could not be handled without rupture. An old, but distinct, track of pus, with limiting adhesions, could be traced up behind the colon, behind and up over the right lobe of the liver to a depression upon its upper surface about the size of a hen's egg. Fully half a gallon of pus was found free in the abdominal cavity. The pleural cavity was normal.

We read a great deal nowadays in our journals as to when to operate. While there is a strong probability that timely operation would have saved life in Case No. 4, would it have been justifiable in any or all of the other three?

Society Reports.

TORONTO CLINICAL SOCIETY

The forty-ninth regular meeting of this Society was held in St. George's Hall, Elm Street, on Wednesday evening, the 21st ult., Dr. F. LeM. Grasett presiding. Fellows present: Chambers, J. A. Temple, Allan Baines, Geo. A. Peters, H. J. Hamilton, A. A. Small W. H. B. Aikins, J. O. Orr, Badgerow, Leslie, Spencer, Harrington, Geo. Elliott, Rudolf, Parsons, Fenton, C. Murray, Primrose, Britton and Thistle.

Facial Spasm.

Dr. H. J. Hamilton presented a case of facial spasm for Dr. H. B. Anderson. An informal discussion was taken part in by Drs. Temple, Baines, Grasett, Peters and Chambers.

Phosphatic Calculus.

Dr. Geo. A. Peters showed a phosphatic calculus weighing one ounce, and described the case; another calculus with nucleus of oxalate of lime, and a phosphatic covering; also unique device composed of a horse-shoe and plaster-of-Paris, for cutting calculi. The cases were discussed by Dr. Grasett and Spencer.

Uric Acid Calculi.

Dr. Spencer showed three uric acid calculi the size of peas, voluntarily passed per urethram by man aged seventy years.

Dr. Peters in discussing these thought they might have formed in a sacculus of prostate gland, and doubted their being uric acid.

Estlander's Operation.

Dr. Primrose presented specimen, portion of thoracic wall removed from patient with chronic empyema.

Drs. Spencer, Parsons, Rudolf and Britton contributed brief discussions.

GEO. ELLIOTT,

Secretary.

Editorials.

OUR SALUTATORY.

THE CANADIAN PRACTITIONER AND REVIEW now appears for the first time, and is the result of an ama'gamation—pure and simple—of two strong medical journals previously existing. As to the form of the present journal we have endeavored to accommodate ourselves to the views of many of our friends, including such as “a reader of twenty-four years” of the older of the former journals. We do not wish, however, to sink the identity of either in the fusion, which does not happen in any sense to be an absorption of one on the part of the other.

Our main effort will be to attain a high standard from a literary point of view; and for that reason we appeal to our friends, wherever they may be, to assist us by contributing freely to our columns of original matter. We ask not simply for papers on medical subjects, but also for reports of cases in practice.

As to general policy, our chief desire will be to publish a journal for general practitioners in medicine, and not for any cliques or parties—if such exist. We believe that it will be generally admitted that medical partyism in various spheres is either subsiding, or growing less acrimonious. In the Province of Ontario and in the city of Toronto there seems to be a tendency for certain parties who opposed each other strongly some years ago to come closer together, and to work better together for the good of our profession at large. We will gladly support and encourage those who are working on these lines.

Our legitimate circulation will be large—we think we can fairly say, at least as large as that of any other medical journal published in Canada. This will be quite as satisfactory to our regular subscribers as to our advertisers, although the latter may take a more engrossing interest in this aspect of our position. Even advertisers, however, are becoming suspicious as to the worth and influence of purely advertising journals.

For the many kind expressions of approval of the amalgamation on the part of our contemporaries, and for the vast number of congratulations received from our friends in divers places we desire to return very sincere thanks.

LA GRIPPE.

La grippe, or influenza, is more or less prevalent in all parts of this continent. It was estimated that there were one hundred thousand cases in New York, December 20th, and the health commissioners of the city have formally declared the disease both contagious and infectious, and have requested physicians to report their cases, and keep their patients isolated as much as possible.

There can, of course, be no doubt that influenza is infectious in the highest degree, and frequently spreads with extraordinary rapidity. We noticed this especially in the severe epidemic of 1889-90. It prevailed extensively in St. Petersburg, in October, 1889, and, travelling west, swept over Europe, and reached England in December. In the latter part of the same month it reached this continent, and its ravages continued during January and February of 1890. The disease is said to be endemic in the eastern portion of Russia and Central Asia, and all our severe epidemics have come from that locality. In fact, the disease is known in some parts of Europe as the Russian fever.

The present epidemic is not very severe, so far as we know, at the time of writing, although there have been some deaths from what is known as grippe pneumonia. In such cases, however, the pneumonia is probably not a part of the disease itself, but rather a complication. It is frequently difficult to decide as to isolation. It is no trifling matter to properly isolate a patient, and in mild cases so much trouble seems to most people unnecessary. When in doubt it is better to recommend isolation, and let the friends of the patient, if they object to the inconvenience of such procedure, assume full responsibility in the matter.

GIFTS FOR SCIENTIFIC AND EDUCATIONAL PURPOSES.

In recent years it has become quite the fashion to both give and bequeath large sums of money for scientific and educational purposes. Stamford, Johns Hopkins, Cornell and other universities in the United States are examples of institutions with endowments running well up in the millions, due to the generosity of wealthy citizens. The fashion or epidemic struck Montreal some years ago, and as a result many millions have been given to educational institutions and hospitals in that city. Among the most generous have been Lord Strathcona, Lord Mount Stephen, Sir William Macdonald, the Molsons and others. Sir William Macdonald received his knighthood last month, chiefly, or altogether, as a reward for his generosity in this direction. He was born in Prince Edward Island in 1833, and commenced business in Montreal in 1854. His gifts to McGill University amount to \$1,650,000, distributed as follows: \$20,000 to the Thomas Workman Endowment for mechanical engineering; \$350,000 to the W. C. Macdonald engineering building and endowment; \$40,000 for a chair of electrical engineering; \$300,000 to the Physics building; \$90,000 towards the endowment of two chairs of electrical engineering; \$150,000 to the faculty of law; a further sum of \$150,000 for the maintenance of the engineering building; \$50,000 to a pension fund; \$500,000 to the latest building for the departments of chemistry, mining and architecture, and the endowment of a chair of mining engineering.

A few days ago an announcement was made in England by Lord Lister and Sir Henry Roscoe of a princely gift of \$1,250,000 to the Jenner Institute of Preventive Medicine by Lord Iveagh, formerly Mr. Edward Cecil Guinness, the head of the great Guinness firm in Dublin. The purpose of the gift is to promote research in bacteriology and other forms of biology as bearing on the causes, nature, prevention and treatment of disease. It is confidently expected that this gift will enable the Institute to compare favorably with any similar institution in the world, and will remove from the British Isles the reproach that their opportunities for research directed towards the prevention of disease are not equal to those of other nations.

THE CRUSADE AGAINST TUBERCULOSIS IN ENGLAND.

We have already referred to the crusade against tuberculosis in Great Britain, which has been largely due to the efforts of Malcolm Morris, the able editor of *The Practitioner* (English). The June issue of this great medical monthly magazine was devoted entirely to a consideration of tuberculosis and its ravages, especially in England and Wales. The Editor again refers to the subject in the December number, in an article from which we extract the following paragraphs: "The crusade against tuberculosis, which was first preached by *The Practitioner*, has been entered upon with an enthusiasm beyond my most sanguine hopes. The medical journals are full of it. At meetings of medical societies in town and country a paper on the open-air treatment of phthisis is pretty sure to be among the communications presented. In every presidential address the subject comes up as unfailingly as the head of the 'Royal Martyr' in Mr. Dick's Memorial. . . . The medical profession is evidently beginning to realize that consumption is not only preventable but curable, and, in spite of the sniffings and shruggings of superior persons, it is everywhere joining in the movement. The public is also becoming aroused to the importance of the matter, and, what is still more satisfactory, municipal and other local authorities are not only sympathetic but active in support."

We are also making some progress in the right direction in Canada, but our municipal bodies are moving somewhat slowly. We have our excellent sanatorium at Gravenhurst, which has been a boon for a limited class of consumptives, but has not thus far been available for those unfortunate victims of tuberculosis who are unable to pay for treatment. The Council of Toronto has been urged by the profession of the city to take certain steps towards the establishment of a sanatorium for our sick poor consumptives, but is slow in responding in a satisfactory manner.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. E. GRAHAM, J. FERGUSON, T. McMAHON,
H. J. HAMILTON.

Fear Neurosis.

Dr. Morton Prince, in the *Boston Medical and Surgical Journal* for December 22nd, offers some careful observations of a condition which he calls fear, or phobo-neurosis, rather than phobo-psychosis. He claims that this is a distinct neurosis, and that it has never as yet been described. The reason why this neurosis has been overlooked is because it has been regarded merely as a manifestation of timidity. But, while it is quite true that it arises from timidity, or self-consciousness, yet it persists long after all timidity has passed away as an automatic affection. He points out that, though the symptoms are the natural physical manifestations of fear, they are not accompanied by this emotion. The condition exists apart from any psychical state as a group of pure physical symptoms.

At first there is a natural or excessive timidity. In this timid condition certain environments excite fear and its accompaniments, such as tremor, palpitation, faintness, etc. By constant repetition of this excitement, these symptoms become welded together into an automatic process, which persists as habit neurosis. This must be regarded as a sort of degeneration of nervous process by which associated actions become grouped together. This is a process by which certain arts are learned, as violin playing, etc., and certain morbid states are developed, as some of the neuroses and psychoses.

After the condition of this neurosis has been well developed the exciting cause of any individual attack is some primary suggestion in the form of apprehension, or expectation that these symptoms will repeat themselves. To this there is usually added the direct excitant of making some public appearance.

There is a feeling of being watched, faintness, perspiration, flushing of the face, confusion of thought, depression, a sense of indigestion, a feeling of goneness, an ataxic feeling in hands and feet, dryness in the throat, coldness in the hands.

These feelings and symptoms become so organized that the fear of their recurrence renders it impossible for some singers,

musicians and public performers to appear before an audience. The thought that they are going to perform will bring on the whole train of symptoms, and render them unable to go on with their practice.

These symptoms may complicate a true condition of neurasthenia, but may exist by themselves as an independent neurosis. The symptoms are often of such intensity as to be a matter of considerable suffering. They come on with such suddenness as not to allow for thought. At a time when the person is lecturing, playing, practising, or so on, these feelings come on with a rush. To continue with the performance under these conditions calls for the utmost exercise of will power, and this in turn is very exhausting.

The knowledge of the possible return of these symptoms at some critical moment depresses the person. This intensifies the neurosis. Actual suffering results from this in the form that the persons think they are regarded as timid when they are really not so.

Myxedema and Allied Disorders.

Dr. William M. Ord, in the Bradshaw Lecture (*Brit. Med. Journ.*, November 12th), reviews the present state of our knowledge on this disease.

The first thing to attract attention is the condition of the skin, which undergoes very important changes in its surface and in its glands. The skin becomes greatly thickened, and there is a marked increase in the subcutaneous tissue. The mucous membranes undergo changes resembling those in the skin. It is a matter of special note that the thickening and œdema are not of a dropsical nature. There is no tendency to gravitate toward the dependent portions, nor to pit on pressure. The skin is everywhere dry, and in many places is much thickened in the epithelial and dermal layers.

There is a remarkable change in the expression of the person. The skin over the cheeks and forehead is dry, thickened and translucent, but firm to the touch. It has much of the appearance of one ill with acute Bright's disease; but there is an absence of pitting on pressure. Eyelids droop, and are raised by the elevation of the eyebrows. The lips are so swollen as to destroy all expression. The ears are very much enlarged and thickened. The whole face wears the appearance of a sorrowful mask.

The thyroid glands present an enlargement on each side of the neck. These are likened sometimes to lumps of dough. The lecturer states that they feel more like a large ripe tomato under the skin. These lumps are made up of fat, changed connective tissue, dilated veins. These enlargements are charac-

teristic of sporadic cretinism. The hands become broad and unshapely. They were likened by Sir W. Gull to spades.

One of the early symptoms of the disease is a dry, brittle condition of the hair. This atrophy of the hair goes on until it completely disappears over the entire body.

The mucous membranes swell. In the mouth the cheeks press against the teeth, and the inner surface of the lips become much thickened. The tongue is large and anæmic. The gums are swollen, and yet recede from the teeth. They tend to ulcerate and bleed.

The nervous system undergoes some very characteristic changes. Tactile sensation is very much diminished. This is most marked in the fingers, which lose mobility as well as touch. In some cases certain portions of the skin lose all tactile capacity.

The muscular system becomes much weakened. The least exertion produces extreme exhaustion. The muscles become quite tremulous on making any effort. They become so weakened as to be unable to support the head in some instances.

The speech is of a most characteristic kind. It is nasal and leathery. The words seem to stick at the lips. The patients, in their efforts to speak, make writhings with the upper lip. The words are often ejected with a sort of explosive jerk. In spite of the slowness of speech, there is a strong desire to talk, and many of these patients would talk for an hour continuously in a monotonous manner.

The mind undergoes important changes. In some cases it is lethargic and placid. Generally, however, the mind becomes suspicious. This suspicion generally takes on the form of thinking that the sufferer is being watched and unfavorably criticised. This may so irritate the patients as to make them violent. There may be a tendency to suicide arising from this frame of mind. Sometimes they bemoan their lot, as they think they have done some evil, or that some malignant influence haunts them.

The temperature is usually reduced. From 1° to 3° F. is the amount of the reduction in typical cases.

There is a strong tendency to hemorrhages. From the nose, from the extraction of a tooth, and post-partum are common forms. The most serious is apoplexy.

Myxœdema and sporadic cretinism are attended by changes in the thyroid gland. In the early stage this may be enlarged, and there may be a period when the symptoms are like those of Graves' disease. In typical cases the gland is atrophied. The secreting structures are replaced by connective tissue. The secreting power of the gland may be destroyed with an enlarged condition, owing to overgrowth of adventitious tissue.

In cases where the gland has been removed, that of strumipriva, the same general conditions are found.

The general and special treatment are well known. Warmth is very necessary. For this purpose, change to a warm climate is very helpful. Thyroid preparations are the specifics in the disease. Sometimes thyroid is administered in the form of glycerine extract, ℥xv. or xx. every day or other day by hypodermic method. At other times the raw gland is fed to the patient, or some solid extract as in some of the tablets on the market. Great care is required not to push a good thing too far, as the patient may be made very ill. Too free use of the thyroids may cause fever, nausea, headache, palpitation, etc.

Diseases and Their Treatment.

Dr. Wm. Ewart, in his Harveian Lecture (*Brit. Med. Journ.*, December 10th), refers to some very important topics. Among them may be noted the following:

One of the most important facts that the general practitioner has to bear in mind is the limitation of disease by sanitation and preventive medicine. The field of the general practitioner is also greatly narrowed by the increasing number of specialists, into whose hands many of his patients drift, and he loses exclusive control over them.

The spread of knowledge regarding the early detection of disease has done much to lessen spread by infection. Through the aid of bacteriology much advance has been made in etiology and, consequently, in prevention. By the discovery of Jenner, it has been shown how diseases of certain kinds may be stamped out altogether.

The advance in hygiene, having its origin in a knowledge of contagion, has been enormous. Typhus, typhoid fevers, cholera, the exanthems, the plague, septic diseases and puerperal fever have been almost stamped out, or very greatly controlled. Diphtheria has yielded, to a very large extent, to the antitoxin treatment. Other efforts in the same direction hold out much promise. The brilliant advances made in surgery tend to eclipse those made in medicine, and yet the arrest of a single disease such as typhus, cholera or small-pox, saves more lives than all the work of surgery put together.

The field of phthisical diseases is now the one of most need for attention. The progress made already is very gratifying. Much has been done to save life. In this disease there are two infections to study, that of the specific germ, and the accompanying septic germs. The great remedy for this disease is that of prevention.

Disease cannot be wholly abolished. There must ever be those of childhood, puberty, maternity and the accompanying

gynecology, the climacteric, accidents and old age. Diseases arising from dietetic errors are likely to remain with us. The large and important group of degenerative diseases in the renal, vascular and nervous systems are inseparable from the advance in age of the human body. The conditions of modern life are held to increase cancer, insanity and nervous diseases.

Much good has been done in the direction of securing better and purer foods, and the inspection of meats and milk. On the other hand, new drugs are being introduced that threaten to give rise to many cases of habituation. The unskilful use of condensed milk and babies' foods has been productive of much disease and suffering to infants.

Tropical diseases are now becoming of much importance. In these days of rapid travel, there is much risk of the importation of epidemics of high mortality and active contagion.

Sanatoria for Consumptives.

Dr. J. M. Anders, in the *Therapeutic Gazette* for December, 1898, deals, in his usual scholarly fashion, with the above topic. He claims that the progress of scientific research and clinical experience for the past twenty years have been bringing thoughtful men to regard the hospital and sanatorium treatment of consumptives with favor. This change in opinion is the outcome of much observation, discussion and writing upon the subject. This disease is one of the greatest afflictions of the human race, and every means of arresting its spread is desirable.

He states that to England belongs the credit of having first established hospitals for the treatment of consumptives. The good work done in Britain by the hospitals is enormous. During the last forty years the death rate has been reduced 50 per cent. This has been brought about by the isolation on the one hand and by the knowledge that is spread in this way throughout the population that the disease is infectious. In England and Wales, per 1,000,000 of the population, the death rate is as follows: 1870, 2,410; 1875, 2,202; 1880, 1,869; 1885, 1,770; 1890, 1,682; and in 1895, 1,468. A close observer states that since 1870 the death rate from consumption has decreased by 39 per cent. in England, and by 36 per cent. in Scotland.

In Philadelphia the deaths from this disease have been decreasing, since 1870, at the following rate per 1,000: In 1870, 3.42; 1880, 3.17; 1885, 2.97; 1890, 2.64; 1893, 2.39; 1894, 2.20; 1895, 2.10; and 1897, 1.96.

A very notable fact is to be found in the experience of some large cities where the death rate rapidly decreased after the establishment of suitable hospital accommodation for consumptives.

It has been fully settled, especially by the researches of Arthur Ransome, that tuberculosis clings with great persistency to private dwellings. In this way the disease is spread.

In the sanatorium in the Adirondacks, by Dr. Trudeau it is claimed that about 20 per cent. are apparently cured, and that in 30 per cent. more, the disease is more or less arrested.

Another fact that becomes very apparent upon a study of the disease, is the heavy death rate from it among the poorer classes. This arises from bad housing, poor food and lack of sanitary care, and from direct infection owing to those afflicted sleeping and living with those who are still free from the disease. It is for these cases that hospitals are of the greatest importance.

Gastrostomy and Curettement of Carcinoma of the Cardia.

At the last annual meeting of the British Medical Association, held in Edinburgh, July, 1898 (*Brit. Med. Journ.*, November 19th, 1898), Dr. Fenton B. Turcke, of Chicago, described his new method of operation for gastrostomy, and also an operation for curettement of carcinoma of the cardia. His operation for gastrostomy consists in reaching the stomach by the direct method, using folds of the stomach wall to act as valves or sphincters.

The preliminary incision is made and the external wall exposed with the usual antiseptic precautions. A fold is then made in the anterior wall of the stomach from above downwards and fixed by three stitches. A suture is passed through the wall of the stomach at the lower margin of this fold and threaded through a perforated trocar. The trocar and cannula are then held across the fold transversely. The fold is stitched around the cannula, and another fold taken up from below and stitched over this, forming a ring which is next sutured to the peritoneum and rectus fascia. The trocar is now thrust through the wall of the stomach and withdrawn, together with the thread which passed through it and acted as a guide. Then the cannula is left in place and the wound closed around it.

The advantages claimed for this operation are that it takes only a short time to perform it; that it occupies a less extensive space in the anterior wall of the stomach than most of the other operations in which the stomach is entered obliquely, and that it makes the most perfect valve, preventing any possible escape of stomach contents.

Dr. Turcke claims priority over Senn and Fontan, who in 1896 described methods of producing a valvular opening "similar to the ileo-cecal valve," having first devised his method in 1895 and published a description of it in the *Medical News* of April 4th, 1896.

For curettement of carcinoma of cardia Turcke has devised an instrument which may be described as a cone, with narrow knife edges set at an acute angle upon its sides. In suitable cases this is inserted into the abdominal wound, and the constricted cardiac orifice reached and burred out, so to speak, by attaching the broader end of the instrument to a revolving stem, thus increasing the calibre of the orifice.

[*Remarks.*—While conceding the advantages to be derived from the method of operation for gastrostomy, we confess our inability to determine the cases in which curettement would be either safe or useful. The latter must in all cases be fraught with so much danger that none but the most daring would ever attempt it.]

Thrombosis of the Mesenteric Veins.

Koester (Abstract in *Medical News*, from *Deut. med. Wochens.*, May, 1898) puts on record three cases of thrombosis of the mesenteric veins—a rare affection and one about which little has been written. The resulting gangrene in one case affected the large intestine, and in the other two a part of the small intestine. The symptoms were similar to those of a case of embolism of the mesenteric artery, also reported by Koester. All the patients died. If operation was attempted it was seen to be hopeless as soon as the belly had been opened. By comparing the symptoms in these cases with those of the ten previously recorded cases, it is possible to draw a fairly clear picture of the disease. The patient may be attacked suddenly in perfect health, or he may be recovering from some severe illness. There is invariably intense abdominal pain with vomiting, and often stoppage of the bowels and collapse. The abdomen is extremely tender, and if the patient outlives the shock, tympanitis follows. In a few instances there has been bloody diarrhea. Death is not long delayed. Sometimes it comes in a few hours. In one case it was delayed for three days. . . . The diagnosis is not to be made with certainty during life. The affection can readily be confounded with acute ileus, or a perforative peritonitis, or even with an invagination.”—*From Quarterly Med. Journ.*

[I saw a case of this kind. Dr. Ross operated—found the condition. Man died.—T. M.]

Diphtheria Antitoxin.

Dr. F. Gordon Morrill (in *Univ. Med. Mag.*), visiting physician to the Children's Hospital, of Boston, as a result of his observations and researches upon the immunizing power of a single injection of diphtheria antitoxin, recorded in the *Bos. Med. and Surg. Journ.*, concludes :

"1. That immunity in any given case, of no matter how thorough exposure to diphtheria, may be conferred, for at least ten days, by the injection of a small dose (100-250 units) of serum, provided it is given twenty-four hours previous to actual infection.

"2. That a larger dose (250 units for a child of two, up to 500 units for one of eight or over) will confer safety for three weeks—or to be a little more conservative, let us say twenty days—under similar conditions.

"3. That no harm will result from the treatment in a vast majority of cases of *sick* children, and probably in no case of a healthy child provided the serum used is up to the present standard of purity.

"In conclusion, I would say that any one who thinks that antitoxin will prevent the occurrence of a follicular tonsillitis or of a coryza in an individual who happens to have the Klebs-Löffler bacillus in his throat or nose will be disappointed; for neither of these conditions constitutes a diphtheria any more than the coexistence of the pneumococcus in the saliva and a bronchitis constitutes a frank pneumonia. I will add that a physician who fails to promptly immunize the members of a family or close community in which diphtheria breaks out, neglects to do his duty by those whose safety lies in his hands."
—*Clinical Review.*

Weil's Disease.

Leick (*Deut. med. Woch.*) reports a fourth case from the Greifswald clinic. The four patients were all engaged on the same estate, and attributed their illness to contaminated food, with the exception of the last one. The author draws attention to the fact that during many years the only cases of Weil's disease have come from this one place, and have occurred within the last two years. In the present case a man, aged 28, was seized with vertigo, and a feeling of prostration, with pains in the splenic region. A few days later there was jaundice, loss of appetite, thirst, and diarrhea. On the fourth day vesicles appeared on the lips, and there was marked epistaxis. Delirium occurred, especially at night. On admission, there was marked jaundice, as well as petechiæ scattered over the body. Temperature 31.2° C.; pulse, 112. The spleen was distinctly enlarged, and the urine contained a little albumen. Under treatment, mainly dietetic, the temperature gradually fell, and the other symptoms diminished. The pulse fell to fifty beats a minute. Convalescence was slow and interrupted. On the nineteenth day after the onset there was a relapse, the fever lasting several days. The illness presented all the characteristics of Weil's disease, including the tenderness over the

liver and the muscular pains. The etiology is very obscure. Bacteriological and other examination of the blood was negative. The author vigorously opposes the view that Weil's disease is really enteric fever complicated by jaundice. Widal's reaction is absent. He looks upon it as a disease by itself, of which the specific infective virus is as yet unknown.—*Brit. Med. Journ.*

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Injections of Saline Solution in Shock.

W. Thelwall Thomas, F.R.C.S. Eng., has a very interesting article on this subject in a recent issue of the *Lancet*. When an animal is killed by bleeding, all the blood does not escape, yet the animal dies. The quantity remaining in the tissues, although containing a large number of blood cells, is of no use, because it ceases to circulate, a small stream being unable to travel by reason of the great inequality between its size and that of the large vessels. The heart has little or nothing to contract upon, and even if a little blood gets into the large arteries, the vessels cannot pass it along. The more sudden the loss, the quicker the collapse and death; the slow loss of blood allows time for transudation of fluid into the vessels from the tissues. . . .

Goltz recognized the salient fact that death from loss of blood was really due to loss of liquid from the vascular system, and that any suitable solution—*e.g.*, saline solution or artificial serum—would do for injection.

Dr. William Hunter . . . showed that (1) the immediate source of danger from sudden loss of blood is the rapid fall in blood pressure; (2) that the value possessed by transfused blood is almost solely physical and dependent upon its volume; and, lastly, that all the advantages of transfused blood can be more readily and safely obtained by the use of simple saline solution . . . normal saline solution, six parts of sodium chloride to one thousand parts of sterilized water. . . . The emergency method of dissolving a teaspoonful of common salt in a pint of water . . . is near enough.

The fluid may be injected by pressure into the cellular tissue, under the mammary gland, in the groin, or in the axilla, . . . but all these methods are only serviceable when circulation is proceeding and absorption possible, and are of necessity slower in their action than injection into the veins direct. *In extremis* nothing short of salt solution directly into a vein is of any use. For this purpose the apparatus generally used by me consists

of a glass syringe (capacity four ounces), two feet of rubber tubing, and a curved metal cannula to fit a vein of the size of the median basilic vein. . . . The piston is withdrawn and the whole apparatus filled with salt solution before fitting the cannula into the vein, to prevent, of course, entrance of air into the venous system. The cannula is tied into the vein selected and the syringe elevated. If the fluid does not run in quickly enough, the piston is inserted and the liquid forced in. A finger-and-thumb clamp of the tubing at the nozzle of the syringe enables the syringe to be withdrawn, filled again and reapplied, and so on until enough fluid has been forced in. (The writer then cites three cases in which injections of from twenty ounces to a pint and a half of saline solution into the median basilic vein, or into the saphena vein in a bleeding stump, proved very effective; a case of severance of the common carotid artery and external jugular vein; another of secondary hemorrhage in an amputated leg, and another in hemorrhage from a crushed leg. In all of these the patient's life was saved.) . . . The ward sisters have noticed that patients perfused always appeared to have a good night after the operation and rarely complained of pain. The solution appeared to possess anodyne properties. . . .

I am convinced that in saline flushing of the abdomen, injection into the rectum or into veins, we have a valuable, probably the most valuable, means of dealing with collapse, whether due to loss of blood or not.

In cases which are not extreme, elevation of the foot of the patient's bed twelve or eighteen inches and the injection of a quart or more of hot saline solution into the rectum by means of a Higginson syringe with a French catheter on the nozzle, so that the fluid can readily enter the colon, acts in a few seconds like a charm. . . . It is of very little use in such patients to endeavor to stimulate the heart by ether or alcohol.

Sacro-Iliac Disease.

Archibald W. Cuff, F.R.C.S. Eng., reported in the *Lancet*, October 1st, 1898, an interesting case of the above. In October, 1896, a youth aged eighteen years, whose parents both died of pulmonary tuberculosis, complained of pain in the sacral region. The pain gradually increased, and with the increase of the pain came a sense of weakness in the left lower limb, and an inability to bear much weight upon it. The patient lost in weight, and the lameness, inability to walk, the alteration in the shape and apparent length of the limb became well marked, whilst the pain was much increased by movement and pressure over the iliac bones. The glutei muscles and muscles of the lower limb became much wasted

and an oval, fluctuating swelling, with its long axis almost vertical and about 4 inches in length, appeared over the position of the sacro-iliac joint.

The operation devised by Golding Bird and Collier was performed as follows: A large, semi-lunar flap consisting of skin, fascia, muscles and the posterior sacro-iliac ligament was raised in a forward direction, disclosing an abscess which communicated with the joint cavity. The joint was opened by a $\frac{1}{2}$ -inch trephine, and its cavity was found to contain pus, fragments of bone, and was lined by granulation tissue. The morbid products were all removed, the wound was cleansed, the flap replaced and secured by silk-worm gut. Two weeks later tuberculous nodules appeared along the line of the incision. These were scraped away; the cavity was packed with iodoform gauze, and iodoform emulsion was used in the subsequent dressings. A long, outside splint was applied on the diseased side, and in January, 1898, the wound had healed, the pain and lameness had disappeared, and the patient resumed work, enjoying the best of health and with no loss of stability in the pelvis.

Intraperitoneal Rupture of the Urinary Bladder.

H. Littlewood, F.R.C.S. Eng., reports in the *Lancet*, October 1st, a case of the above, with abdominal section, suture and complete recovery.

A man, aged twenty-eight years, arriving at his home at 11 p.m. much intoxicated, giving no account of what had happened to him, complained that night and next day of a diffuse pain in his abdomen. He was seen at 10.30 the next night, when the following notes were made:

1. Diffuse abdominal tenderness and signs of fluid in the peritoneal cavity.

2. Pulse, 88, soft; respiration, 18.

3. Had passed no urine since the previous night; two ounces were obtained by catheterization.

Next day the following notes were made:

1. Temperature normal; pulse, 100; diffuse abdominal tenderness; distinct signs of fluid in the peritoneal cavity.

One ounce of urine was removed by catheter and diagnosis of intraperitoneal rupture of the urinary bladder made.

Abdominal section revealed four pints of a turbid, urinous fluid in the peritoneal cavity; the intestinal coils seen were glued together by a purulent lymph; a rent in the median line of the urinary bladder, $1\frac{1}{2}$ inches in length, extending up to the peritoneal reflection; the vesical wall thick and apparently healthy.

The rent was closed by the Lembert suture, catgut being

used; the peritoneal cavity carefully cleansed, and drainage in the form of a Bantock's tube was employed for forty-eight hours.

The patient passed water in six hours; has continued to do so regularly ever since, catheterization never being necessary; temperature remained normal, and the patient made a complete recovery without a single bad symptom in three weeks.

Dr. Littlewood states that an early diagnosis and early operation in all intraperitoneal catastrophies are of the greatest importance, and the treatment in this case is the treatment employed in all the successful cases reported.

A Case of Septic Peritonitis; Laparotomy—Recovery.

H. W. Mills reported an instance of the above in the *Lancet* of October, 1898. The patient, a strong, well-nourished woman, gave a history of gonorrhea many years ago, and of recurring attacks of pelvic peritonitis followed by pelvic abscess discharging per vaginam. During one of such attacks the abscess burst intra-peritoneally and septic peritonitis resulted. The patient lay upon her back with legs drawn up; distended abdomen; low, muttering delirium; vomiting; temperature, 103° F.; pulse 140.

Per vaginam the uterus was fixed as if in a plaster cast, cervix high up, and the posterior and lateral fornices bulging. Abdominal section two days after the rupture revealed superficial coils of intestine, abdominal wall and omentum densely adherent, and when the general peritoneal cavity was opened, several quarts of a brownish, very offensive fluid containing large, thick flakes of lymph escaped, followed by a pint of offensive brown pus. The upper part of the abdominal cavity was shut off by adhesions. The abdominal cavity was thoroughly cleansed with boiled water, packed with iodoform gauze and a tight binder applied. The patient was kept on fluid diet, and stimulants and opiates given as required; the abdominal cavity being irrigated twice a day with boric acid lotion and later with liquor sodæ chlorinatæ and packed with iodoform gauze. Intestinal obstruction threatened several times; the discharge, at first very purulent, gradually became more serous and less in amount, the cavity closed, and the patient, now a year after, is enjoying the best of health.

A Simple and Effectual Method of Sterilizing Catgut.

Mr. Mayo Robson describes a "simple and effectual method of sterilizing catgut" in a recent issue of the *Lancet*. He says a growing sense of the superiority of readily absorbable material, such as catgut, for ligatures and buried sutures, if

only one could be sure of its absolute asepticity, and the uncertainty of the commercial preparations led him to make some experiments on the effect of heating catgut in substances other than water with a view of determining whether, after heating for some time at a temperature of 100° C., it would still be sufficiently strong to be employed as a suture or ligature. Alcohol, xylol, aniline and glycerine were tried, but xylol (di-methyl-benzene) was found to give the best results. At first, dry, chromic, carbolic catgut was used, but he finds ordinary unmedicated catgut equally good. The exact method of preparation is as follows:

The catgut is wound loosely from end to end round an elongated glass reel, and several of these reels are introduced into a metal cylinder, the cap of which screws on, and after more xylol than is sufficient to cover them has been poured in, the cap is adjusted. The whole is then put into the boiling water of the sterilizer and allowed to remain along with the instruments for from twenty minutes to half an hour. After being thus sterilized the reels with the catgut, which has shrunk round them, are removed at once and kept either in 5 per cent. carbolic acid solution or in methylated spirit, the latter being preferable, as an aqueous solution tends to cause catgut to swell. In this solution they may be kept on the reels until required. He has kept them as long as five weeks without any diminution in the strength of the gut, but he ordinarily prepares the catgut at the same time and along with the instruments before each operation. After each heating, the cylinder should be dried and the used xylol rejected, as a certain amount of decomposition takes place, and catgut will soften if heated in it a second time. Care should be taken that no water is allowed to mix with the xylol, or the catgut will gelatinize. The great advantage of this method of sterilizing catgut lies in its simplicity, and the ease with which it can be carried out.

Another method of sterilizing catgut is described by J. H. Dauber, M.R.C.P., of the Hospital for Women, Soho, London. It is the method of sterilizing by dry heat, adopted by Professor Tscherning, of Copenhagen. The ordinary commercial catgut is placed on trays in the sterilizer between sheets of cellulose paper. It is then heated for six hours consecutively—for the first hour at a temperature of 60° C., for the second and third hours at 100° C., and for the fourth, fifth and sixth hours at 140° C. It is then removed, wrapped up and closely sealed in an envelope of cellulose paper, which is again placed in another envelope of slightly larger size and similarly closed. The catgut, now encased within two firmly sealed envelopes, is a second time placed in the sterilizer and subjected for another two

hours to a temperature of 140°C . The envelopes are placed in racks in the sterilizer, and contain various sizes of catgut labelled on the outside. These envelopes can be taken from the sterilizer and placed in the bag of the operator, and need not be opened until the time of operation. Catgut ligatures kept for any time in an aqueous antiseptic solution become soft and lax, and if kept in spirit, hard. The dry catgut is without these disadvantages.

The method of raising the temperature by slow degrees prevents the catgut becoming brittle, the grease and oil in the gut being driven off gradually at the lower temperatures.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Significance of Pain in Gynecological Diagnosis.

Peri-uterine Pain.—This variety of pain has its origin in the tube, ovary or parametrium. It may be primary or transferred; one variety is called, for the want of a better name, pelvic neuralgia. In the acute inflammation of these parts the pain is deep and lancinating, and radiates throughout the pelvis, corresponding to the ramifications of the sensory nerves; in the chronic inflammatory processes, where cicatrices, adhesions, or scleroses are present, the pain is local and more specific in relation to the diseased part.

1. *Pain in Ovary.*—The sclerotic or sclero-cystic ovary is usually very painful. This is not surprising if we reflect that the lesion reveals an hereditary or acquired predisposition to the sclerotic processes. The constitution of the patient could in most cases be defined by the term neuro-asthenic. Where the primary inflammation is slight, or where the sclerotic processes indicate a vicious type of degeneration of the ovary, it is certain that the rupture of the follicles is painful, and the work of elimination slow and preceded by a long congested period with apoplexy of the cortical substance. This process tends to the formation of hypertrophy, and is frequently attended by hemorrhage. In such cases menstrual period is particularly painful. If there be prolapse of the ovaries with adhesions the local pain is increased. In the intra-catamenial period, when the ovaries have been primarily affected, we often notice as a consequence a singular alternation upon the two sides of the pelvis, the pain being the one side one month and the other the next.

2. *Pain in Fallopian Tubes.*—Chronic salpingitis is painful for two reasons: first, on account of the exudations causing

adhesions with the neighboring organs; second, on account of distention of the tube, usually at the menstrual period. One fact appears to us to be beyond dispute, that small and lax adhesions no more than the existence of serous exudations are insufficient in themselves to cause pain. It seems that active inflammation and the presence of infection are needed to make this condition painful. The prolapse of the tube towards the cul-de-sac is always troublesome, and, at least, causes slight pain and uneasiness. We should notice the probability of making a wrong diagnosis in salpingitic pain. The patient might complain of pain in one side of the pelvis, when upon examination inflammatory exudation or a tumor may be discovered upon the other side. We have seen a displaced tube lying across the posterior face of the uterus in such a position that its pavilion, extended by exudation, formed a tumor which was fixed to the pelvis on the opposite side. The pain in this case was located in the fine nerves which are distributed upon the tube through the corresponding ligament. The pain of salpingitis is generally fixed, and undergoes increase during menstruation, not previous to menstruation, as in ovaritis. But after menstruation it undergoes marked decrease, and reappears two or three days later. This latter pain is caused by the traction of the adhesions which fix the tube to the pelvis.

3. *Pain in Inflamed Tubes and Ovaries with Adhesions.*—Pain in this condition partakes of the characters previously described. The pain is sometimes in the ovary, sometimes in the tube, the degree of pain depending to a large extent upon the sensibility of the patient. It may be discovered by direct examination that the location of the pain is in the cul-de-sac. In all cases it is present behind the posterior neck of the womb, and is easily produced by a direct pressure. Pain is also present upon the abdominal walls and in the iliac region corresponding to the affected side. It is both deep and superficial, and may be discovered easily by a slight touch of the skin. If the speculum be introduced too roughly, it occasions extreme pain; the same may be said of vaginal douches when harshly given. Cold increases the pain, and too much walking gives great fatigue. Mental and physical exhaustion also add to the pain, and in some women the least annoyance will revive the pain. The return of each menstrual period increases the suffering in a high degree. The duration of the pain varies with different patients, and is increased by actual congestion of the womb, coitus, and may be accompanied by turgescence of the cervical mucous membrane, and leucorrhœa. The character of these pains is variable. They may be throbbing or extremely sharp; they may resemble severe pinching or convey a burning sensation. It is, however, worthy of attention

that the intensity of the pain does not correspond to the importance of the lesions, for some women scarcely suffer any pain from extensive salpingo-ovaritis, while others suffer severely from an extremely small lesion.

4. *Pain in the Perimetrium.*—In this class we find exudations, adhesions, cicatrices, and chronic infiltrations of the cellular tissue which directly encircles the uterus. We should remember that every cervical, ovarian or tubal lesion, reacts upon the perimetrium or upon the ligaments of the affected parts. We do not consider the perimetrium of paramount importance, but we are obliged to give it consideration in diagnosis and treatment. Pain in lesions of this part does not always correspond with the location of the lesions, which are found by physical examination. A neuritis may be present, or, in the absence of this, a special nervous susceptibility. True neuralgia is allied to the neuro-asthenic constitution, and is at all times distinct from hystericalgia (painful spasm of the neck), which is found in the median region of the pelvis, and which a direct examination proved to be localized at the internal os.

Victoria, B.C.

ERNEST HALL, M.D.

Translated from *La Gynécologie*.

Intravenous Injections of Normal Saline Solution.

Horace Tracy Hanks (*Amer. Gyn. and Obs. Journ.*, September, 1898), as a preventive to shock, instructs his patients to have every hour, for six hours before the operation, from one to three teaspoonfuls of whiskey in one ounce of hot water, and two hours before the operation he passes into the rectum, high above the brim if possible, from one to two ounces of whiskey in four ounces of normal saline solution. Patients thus prepared come to the table with a good pulse and a flushed face. They recover more quickly from ether narcosis, and return to consciousness more promptly, and are not so thirsty and restless.

He uses regular and systematic intravenous injections for loss of blood from any cause, as, for instance, severe traumatism, for the early stage of sepsis, for suppression of urine and obstruction of the bowels from paralysis. One to three pints is usually sufficient, and the temperature is not less than 115° F. The pulse tension is a good indication when to stop. It may be repeated in from four to twelve hours if occasion demands. If a chill follow, too cold fluid has been used. A hypodermic of morphia invariably relieves this.

How this simple saline solution acts is not certain. That the cardiac and arterial ganglia are stimulated is certain, as evidenced by the flushed appearance of the capillaries under

the cuticle. The heart, besides, has something to contract upon and the flushing out of the smallest blood vessels follows.

The common every-day formula, which is easy to remember, is a teaspoonful of table salt to a pint of water, the whole to be boiled for half an hour and filtered through several thicknesses of a sterilized towel, and kept in a close bottle well corked with cotton, and this cotton properly protected with clean gauze.

Before beginning any operation, which may possibly require transfusion, a two-quart bottle is filled with this solution and kept hot with hot towels or water around it. A rubber bag, rubber tubing, and a probe-pointed hollow needle, with eye on the side near the end, are used, and the slit in the vein is only made large enough to admit the probe-pointed needle. These he always carries in the bottom of his instrument bag to every operation so as to have them at hand in any emergency. He advises the saline injection even before operation in patients with a very feeble pulse or in septicemia, especially when an operation is decided upon.

[This method is so little better than subcutaneous injection, or injection by enema, and is at the same time accompanied by such grave dangers that it is not likely to come into general use.—ED.]

Treatment of the Vomiting of Pregnancy.

Bacon (*Amer. Journ. of the Med. Sci.*, June, 1898) publishes three cases of hypermesis gravidarum where he induced premature labor without curing the vomiting, and which all ended fatally. He quotes Cohnstein's statistics, embracing two hundred cases, of which 40 per cent. only were cured by abortion. From his experience and from an examination of the literature of the subject, he draws the following conclusions: (1) The abnormal irritability of the nervous system, including the vomiting centre, is to be allayed by keeping the patient in a horizontal position, by attention to the skin, bowels, and kidneys, using rectal and, if necessary, hypodermic injections of normal saline solution. (2) The hysterical condition so often present should be controlled by strengthening the will and influencing the dominant ideas of the patient. (3) All sources of peripheral irritation should be discovered and treated. (4) In extreme cases subcutaneous saline injections serve the three-fold purpose of (a) diluting the blood and raising blood pressure, (b) eliminating toxins through the renal and intestinal excretories, (c) furnishing two most important kinds of food (chlorides and water). He reports a case in the ninth week of pregnancy and in a desperate condition, where the hypodermic injection of a quart of salt solution twice a day, combined with

washing out the stomach every morning and rectal injections of salt solution four times a day, produced immediate improvement. The vomiting ceased after the second injection, and food was retained, though the patient eventually died of tetanus (? from an infected hypodermic puncture). Laborie in France has also used this method with excellent results. (5) Induction of abortion is never indicated. At a stage when it is safe and efficient, it is not necessary, and in extreme cases it adds greatly to the danger, rarely stops the vomiting, and can be substituted by artificial serum.—*Brit. Med. Journ.*

Influence of Morphine and Ether on Uterine Pains.

Hensen (*Archiv f. Gynäk.*, vol. lv., Part 1, 1898) publishes a very exhaustive monograph on this subject, furnished with instructive tables. He finds that morphine in doses of under a third of a grain exerts no influence on the force of the pains and of the abdominal muscles. Ether causes a distinct effect, as after one or two minutes the force of the pains is diminished and the interval prolonged. When ether is discontinued the previous force of the pains is restored in from five to twenty minutes. Under ether narcosis the abdominal muscles cease to aid in the process of labor. Chloroform produces similar effects on the pains, but when its administration is suspended restoration of the pains to their previous force of frequency is very much slower. Its evil evidence does not disappear for quite two hours. Hence Hensen urges that ether should always be used as the anesthetic in labor. It facilitates turning and forceps delivery as well as the ether compound, whilst its effects very rapidly disappear, a most desirable result when we remember the chances of *post-partum* hemorrhage after instrumental labor.—*Brit. Med. Journ.*, April 23rd, 1898.

A Speedy Method of Dilating a Rigid Os in Parturition.

Dr. J. Farrar, Gainsborough (*Brit. Med. Journ.*, September 17th), describes "a new and speedy method" of dilating a rigid os. He had been in attendance on a primipara off and on for forty-eight hours, and yet at the end of that time the os was not larger than a shilling, and felt very much like a circle of sheet tin. The patient was losing self-control, and as chloroform was contra-indicated he had decided to incise the margin of the os, and before doing so applied a local anesthetic—cocain, 10 per cent. solution—both outside and inside the os. After waiting four minutes he prepared to use the scissors to the margin of the os, and was agreeably surprised to find that "the os had not only lost its rigidity, but that it was widely open and as flexible and distensible as a rubber bag."

Fearing that there was something of "the accidental" in this case he kept a sharp look-out for the next rigid os, and the cocain acted in a similar manner a few months later.

He then brought the two cases to the notice of the Obstetrical Society of London. Now he adds three additional cases, in all of which the cocain acted within four minutes, and in which there could be no reasonable doubt that the result was due to the cocain. In cases of undoubted rigidity, the result of active physiological causes, he does not expect to find failure. "Try it for yourselves and report the result."

Ignipuncture of the Ovary for Chronic and Cystic Ovaritis.

As an alternative to the removal of both appendages by laparotomy, the conservative operation of ignipuncture is well worth a trial. It can be done by vaginal section (either by anterior or posterior colpotomy). The peritoneum having been opened, any adhesions binding down the ovary are separated with the finger. The ovaries, one after the other, are drawn into the vagina and punctured with the fine point of Paquelin's cautery heated red-hot. Whenever there is an indication of a cyst in the cortex, or an unusually thick portion of the capsule of the ovary, the red-hot point is inserted. In this way from six to a dozen punctures, each about $\frac{1}{2}$ of an inch in diameter, are made. The appendages having been replaced in the peritoneal cavity, the vaginal wound is closed with catgut and the patient put back to bed.—CHRISTOPHER MARTIN, *Birmingham*.

Puerperal Sepsis.

This is a preventable disease, and we obstetricians have to face this fact, and do our utmost to accomplish it. If we are not doing this, we are failing in our duties and may justly be held responsible. The day has gone by when we can fold our hands and say it is the will of God when our patients develop puerperal fever.—ROBERT JARDINE, *Glasgow*.

Abortion.

Be conservative in the presence of a normally coursed abortion; wait and give nature an opportunity to act. Be radical when dealing with an abnormally coursed abortion; interfere and empty at once.—FRANK A. STAHL, *Chicago*.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN AND H. B. ANDERSON.

Endocarditis in Tuberculosis: in particular that form caused by Koch's bacillus.

G. Etienne (*Arch. de Méd. Experiment. et d'Anat. Patholog.*, January, 1898) first calls attention to the facts that septic infection during the course of tuberculosis, especially pulmonary tuberculosis with cavity formation, is not rare, and that the explanation lies in the frequency with which secondary organisms—streptococci, staphylococci, pneumococci, Friedländer's bacilli, bacillus pyocyaneus, colon bacilli, etc., etc.—find their way into such cavities. Some believe, indeed, that these secondary infecting forms are largely responsible for cavities. Amongst the lesions induced by these organisms is endocarditis. Teissier has collected records of forty-seven cases; some of these, however, are doubtful, their endocardial lesions, probably, being properly attributed to valvular arterio-sclerosis. Teissier's own cases, beyond dispute, were nine in number. True *tubercular* endocarditis is very rare. Teissier found it in none of his cases. In twenty-eight recorded cases of tubercular myocarditis there is no mention of endocardial lesions. In 845 cases of general tuberculosis brought to autopsy, Willig found no endocarditis. Of possible cases many have not been proven. Londe and Petit have proven a case each by both stain and guinea-pig inoculation; these two only, of eleven recorded cases, are proven by inoculation experiments. By a singular coincidence, Etienne came upon five successive cases of endocarditis in tuberculous patients from Spillmann's clinic. In two only of these were the investigations complete, and in both Koch's bacillus was shown to be the cause of the endocardial changes. In a third the bacillus of Koch was demonstrated by stain, not by inoculation of animals. The two remaining cases were not bacteriologically examined. It is proven, then, that endocarditis may complicate tuberculosis, and that it may show purely tubercular lesions or those of ordinary non-tubercular endocarditis. Caseation of vegetation has been seen. It may be impossible to demonstrate such tuberculosis clinically. It comes late when cachexia is advanced, and masks the special results of endocarditis. The valves are soft and pliable, and close perfectly enough to prevent signs of leakage.

Bacteria and Calculi: Salivary and Biliary.

Hartmann (*Le Bulletin Méd.*, February 27th, 1898) found streptococci in the centre of a calculus taken from Wharton's duct. Mignot, in an examination of seventy cases of biliary calculi,

found bacteria in twenty-three. The bacillus coli com. was most often seen, and he found it also in the bile. He also experimentally produced biliary calculi—corresponding structurally with spontaneously formed specimens—by means of the bacillus coli, and so proves the infectious origin of biliary lithiasis.

The Tonsil as a Point of Entrance for Severe General Infectious Diseases.

Jessen, of Hamburg (*Muenchner medicinische Wochenschrift*, June 7th, 1898), says that diphtheria may serve as the type of infectious disease which begins at the throat. The germ of scarlet fever is also believed to enter at the same portal. It is claimed that from seventy to eighty per cent of all cases of acute rheumatism have an angina as a prodrome.

Of other diseases whose connection with initial angina is hardly suspected by the profession at large, Jessen mentions osteomyelitis, which has been found in a number of cases to date from a streptococcic infection of the tonsil.

Jessen then relates in detail a number of cases in which various grave diseases were ushered in by angina, and where a bacillary investigation of the tonsil showed pathogenic germs. Among the diseases named are acute rheumatism, pleurisy, pneumonia, pyemia, septicemia.

First Experience in the Use of Serum as a Cure and Preventive in Yellow Fever.

Prof. Joseph Sanarelli, Director of the Hygienic Institute of Montevideo (*Ann. de l'Institut Pasteur*, March 25th, 1898), says: We can look for cure of yellow fever in one direction only, viz., towards serotherapy. The idea that specific treatment may be found in this direction is based upon two observations: 1. That tolerance of the virus is seen in those born in countries where yellow fever is endemic or in those who have lived there a long time. 2. That those who recover from an attack have acquired immunity.

This serum for cure and for immunizing differs from other similar serums only in the difficulty found in rendering animals immune from which it is to be taken. Horses require twelve to fourteen months' treatment, steadily carried out, before yielding useful serum. Moreover this serum does not act as do others, e.g., the diphtheria antitoxic serum. It has not yet been possible to demonstrate the presence of antitoxic substances in the serum. Dogs which after a year or more of intensive vaccination are tolerant of a dose, formerly certainly fatal, still vomit, become highly prostrated and show great elevation of

temperature with each injection. This goes to prove the absence of antitoxic material in the vaccinal condition, and that the serum is efficacious only when the fatal dose of poison has not yet been formed in the organism. The serum then is really an anti-microbic, not an anti-toxic serum. It is bactericidal in action, and good results may be looked for only when its use has begun early.

Sanarelli thinks that the ideas of the disease entertained by those who have had no experience in it are commonly wide of the mark. It is thought of as resembling cholera, and showing especially lesions of alimentary tract, whereas it ought to be classed with the typhoid diseases. It is a febrile disease, highly toxic, and with lesions and symptoms which are far from being specially confined to the gastro-intestinal tubes. Albuminuria, anuria, delirium are often seen with no symptoms from the digestive tract at all. In some epidemics anuria is the symptom. In cases in which the kidneys fail of their duty serum treatment is useless.

The Length of the Incubation Stage in Typhoid Fever.

E. Jancken (*Wiener klinische Wochenschrift*, 1898, No. 27) had an opportunity of making an important observation. Certain troops marching through two small villages in which were a number of cases of typhoid fever, drank copiously of water given by the villagers. That infection was acquired in this way follows from the absence of other exposure. Moreover, other troops passing through without pausing to drink remained free from infection. Of the thirty-six cases the symptoms appeared suddenly in all, with headache, chill, fever, severe diarrhea, abdominal pain, and weakness. The course was mild, and defervescence occurred in the third week. The beginning of the disease was noted in three men on the second day (*i.e.*, two days after infection), in seven on the third day, in six on the fourth, four on the sixth, five on the seventh, in the other seven between the ninth and fourteenth days. This shows that under favorable circumstances the typhoid bacilli can produce symptoms within two days. In the cases observed the favorable conditions consisted in great fatigue, excessive thirst, and ingestion of considerable quantities of the infected water. That the germs were not of unusually great virulence may be supposed from the mild form of the disease.—*Amer. Journ. of Med. Sci.*, October, 1898.

Intra-uterine Typhoid.

In the *Scottish Medical and Surgical Journal*, 1898, vol. iii., No. 1, Fordyce reports a very interesting case in which typhoid was demonstrated in a five-months' fetus. The mother aborted

and died soon after. No autopsy could be obtained, but there was no doubt about the diagnosis.

Externally and internally nothing abnormal could be seen by the naked eye in the fetus or its appendages. There was a small quantity of serous fluid in the abdomen. The intestines seemed quite healthy; the liver and spleen were not enlarged. Tubes inoculated from the kidney, spleen, and intestinal contents gave pure cultures of the typhoid bacillus; the blood was sterile. Care was taken to make tests, which showed the absence of the bacillus coli communis. It was impossible to demonstrate bacilli in the tissues by microscopic examination. The Widal test was very successful in this case.—*Amer. Journ. of Med. Sci.*, October, 1898.

Satellitism of Colonies of Pfeiffer's Bacillus in Mixed Cultures.

Mennier (Société de Biologie, Séance du 11 Juin, 1898, *La Semaine médicale*, June 15th, 1898) found that when Pfeiffer's bacillus is inoculated on a proper medium (blood-agar), on which staphylococcus aureus is then planted, the growth of the influenza bacillus is greatly favored, and colonies ten or twenty times the usual size are developed. Divers other common bacteria have the same influence as the staphylococcus, but in a less degree. The mechanism of this symbiosis, this *cultural satellitism*, is obscure, but the observations of the author and of Grassberger show that the fertilization is not due to a product directly secreted by the adscititious germ, but to a modification of the hemoglobin of the medium. The matter is also of practical value, in view of the difficulties attending the cultivation of the influenza bacillus. The author recommends the following method: An aqueous solution of defibrinated blood from the rabbit or, better, the cat is prepared, and is used to impregnate the surface of agar. On this medium the Pfeiffer bacilli are then inoculated, and then, after the tubes have been allowed to dry in the vertical position for a few hours, staphylococcus aureus is implanted at two or three points. Twenty-four hours in the incubator suffice to give beautiful satellite cultures of Pfeiffer's bacillus.—*Univ. Mag.*

Presence of the Meningococcus in the Nasal Secretions.

Schiff (*Centralblatt für innere Medizin*, June 4th, 1898) recalls the fact that epidemic cerebro-spinal meningitis has long been known to begin with violent rhinitis, evidences of which are often found on autopsy. After the discovery of the meningococcus intracellularis in the nasal discharges of meningitic cases, it became the custom to examine for this parasite as a routine measure, and many clinicians have invariably found it. Then

observers began to examine non-meningitic cases to determine whether this parasite, like the pneumococcus, was present in the healthy subject. The earlier investigations having been inconclusive, Schiff was led to look into this matter, and in the nasal mucus of twenty-seven healthy patients found the meningococcus seven times. Cultures proved virulent to guinea-pigs. The fact is established that the parasite occurs much oftener than it infects, and there has long been a conviction that epidemic cerebro-spinal meningitis is spread by the nasal mucus. The curious fact that typical cerebro-spinal meningitis has often followed fracture through the base of the skull is readily explained by the passage of the germ through the breach.—*Med. Rev. of Rev.*

Purulent Arthritis and Friedländer's Pneumobacillus.

Several cases of purulent arthritis occurring in the course of pneumonia are on record. So far, bacteriological examination has shown that the cause of this inflammation of the joint is Fränkel's pneumococcus. Emil Bois describes a case (*Arch. Gén. de Méd.*, May, 1898) in which he was able to discover Friedländer's pneumobacillus as apparently the cause. The writer has only been able to discover one other case in medical literature. In the instance quoted several careful bacteriological examinations were made, consisting of cultures and inoculations, and he was able to find Friedländer's pneumobacillus. This case resembles those due to the diplococcus in the fact that it ended fatally. The prognosis in all cases of pneumonic arthritis is excessively grave, but in a case quoted by Gaillard and Morley recovery took place. This case was one of purulent arthritis of the right wrist, preceded by a lobar pneumonia and followed by a left empyema. The arthritis was treated by incision and drainage, and the patient so far recovered that there was only a slight degree of stiffness of the wrist. The pus from the joint contained diplococci in abundance.—*Brit. Med. Journ.*, Nov. 12th, 1898.

Preservation of Organized Sediments.

Treat the sediment with the following solution :

Distilled water	200.0 grammes.
Sodium chloride	1.0 “
Sodium sulphate	5.0 “
Mercuric chloride	0.5 “

Let settle for twenty-four hours, pour off the solution and wash a few times with distilled water. All constituents of the sediment will present themselves in their unaltered shape and structure, just as they are found in the urine. To obtain a

colorless specimen, take with the pipette some sediment in a little glycerine on a slide and close with turpentine or mastix. Colored preparations are obtained by drying some of the sediment on the air and subjecting it for about an hour to a saturated aqueous solution of methylene blue, after which it is washed with distilled water. After drying, bring under the cover-glass with damar.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON.

Acetylene Gas-light for Examination of the Eyes.

Appenzeller, of Rertlingen (*Centralbl. f. Prak. Augenheilkd.*, May, 1898), has a special apparatus with a 50-candle-power burner which gives an absolutely quiet, white light particularly well adapted for ophthalmoscopic purposes. He considers his apparatus absolutely free from danger, and has used it many times a day with the greatest satisfaction.

Bilateral Chancre of the Eyelids.

Helborn (*Muench. med. Wochenschr.*, May, 1898) reports a chancre of each eyelid. Many other cases of a single chancre have been reported. The disease is inoculated from mucous patches in the mouth or direct from the penis.

[A case occurred in my practice some years ago of a chancre of the lower eyelid followed by enlargement of the pretear glands and secondary symptoms in a young medical man who inoculated himself after a vaginal examination. Serious disturbance of the general health followed. He died of an intercurrent disease two years later. I once saw a chancre on the end of the nose at Fournier's clinic in Paris. The professor explained that the patient was too inquisitive.—G. S. R.]

Indications of Warm or Cold Applications in Eye Diseases.

Herrnheiser, of Prague (*Die Artztlidra Praxis*, Nov. 3, 1898), says that cold applications are indicated in the course of acute catarrhal conjunctivitis, inflammatory stage of trachoma, blennorrhoea and in pain after operations on the conjunctiva and in episcleritis. In interstitial keratitis, acute iritis and iridocyclitis either hot or cold applications may be used. In exudative iritis it is much better to use hot applications. The pain of glaucoma and panophthalmitis is best treated by heat.

[The question of the application of heat or cold in eye diseases cannot, in my opinion, be settled off hand. The rule which I

make is: 1. Acute diseases attended by discharge from the conjunctiva are best treated by cold. Heat promotes discharge. 2. Most acute diseases attended by pain are benefited by hot applications. There are some exceptions which cannot be defined, being the result of individual idiosyncrasy. This peculiarity is sometimes very marked. Cold should never be used after operations on the cornea in old or feeble persons. It is liable to be followed by sloughing of the cornea.—G. S. R.]

Steel in the Vitreous Located by X-ray and removed by a magnet.

Starr, of Buffalo (*Oph. Rec.*, July, 1898), relates a successful case of the above. The steel was removed forty-eight hours after the injury.

PEDIATRICS.

IN CHARGE OF ALLAN BAINES, W. J. GREIG, W. B. THISTLE.

Meningitis.

Bacteriological studies lead strongly to the belief that meningitis in all its phases is an infectious disease. Under the old classifications the varieties of the disease were numerous and confusing, but study of their micro-organisms points strongly to their unity.

Collins, in the *Twentieth Century Practice*, classifies the active exciting causes as follows:

1. Traumatic and infectious.
2. Contagious and infectious.
3. Infectious and metastatic.

The first group includes all the cases in which pathogenic bacteria have gained admission to the body through wounds, injuries, or simple abrasions.

The second group includes those which develop in connection with pyogenic disease of adjacent structures and cavities, such as the mastoid and middle ear, and even organs so far removed as the tonsils.

The third group includes those cases of meningitis which are secondary to other infectious diseases, notably pneumonia, typhoid fever, cholera, dysentery and influenza.

Holt classifies leptomeningitis thus:

1. It occurs epidemically, usually with the same process in the cord, and is then known as cerebro-spinal meningitis.
2. It occurs sporadically as a primary disease, with, it may be, symptoms and lesions identical with those seen in the first group.
3. It occurs as a secondary disease complicating other acute

infectious diseases. We are not, he says, able to separate absolutely these three groups by the clinical symptoms, the pathological findings, or even by bacteriological examination.

The bacteriology of meningitis is not yet fully settled. No specific bacterium has yet been with certainty demonstrated. Like pneumonia, meningitis may be caused by several different forms of bacteria.

Collins divides true meningitis into three varieties: Leptomeningitis, cerebro-spinal meningitis, and tuberculous meningitis. In the first group bacteriological examination will reveal the presence of some pyogenic organism, of which the pneumococcus, the streptococcus pyogenes, and the diplococcus pyogenes are the most common.

In cerebro-spinal meningitis the organism most frequently found is the pneumococcus, which in both sporadic and epidemic cases has been found in pure culture. But recent German teaching attributes much to the diplococcus intracellularis, which closely resembles the diplococcus of pneumonia. The exact relationship of these two germs is in dispute. Tuberculous meningitis is due primarily to the tubercle bacillus, which is, however, often accompanied by pyogenic germs, thus resulting in a mixed infection.

Other causes are simply predisposing. Weichselbaum asserts that the diplococcus intracellularis is the exciting cause of the epidemic form of cerebro-spinal meningitis, although it may be complicated with other germs. It is not, however, asserted that this diplococcus is found in the sporadic forms of the disease, which are said to be due to the common germs of purulent meningitis, particularly the pneumococcus.—*Abstract from Archives of Pediatrics.*

Cerebro-Spinal Meningitis.

T. M. Rotch (*Archives*, September, 1898). A girl, $3\frac{1}{2}$ years old, admitted to hospital, January 17th; symptoms indefinite, a little vomiting and headache, with indications of rachitis. Temperature ranged from 93 to 105, pulse from 98 to 140, respirations 30. Blood examination showed nothing abnormal in the form and size of the red corpuscles. A lumbar puncture was made, and the diplococcus intracellularis was found, and the diagnosis of chronic cerebro-spinal meningitis was made. The subsequent course pointed decidedly to this disease. The case lasted till the end of April, and then recovered.

Intussusception.

T. M. Rotch (*Archives of Pediatrics*).

CASE 1. A girl five years old, with history that for six months she had had paroxysmal attacks of abdominal pain and

vomiting. November 6th, 1897, complained of abdominal pain, which increased during the night, followed by vomiting in the morning. I saw her twenty-four hours after, during which time she had passed no fecal matter, but a bright red blood mixed with mucus. A mass was found in the right hypochondrium, which could not be reached by rectal examination. Hydrostatic pressure from a fountain syringe held at the height of 4 feet was used with an almost instant disappearance of the tumor. There were no more symptoms of intussusception.

CASE 2. A boy two years old, with the following history: No sickness of any kind until twelve days previously, when he fell out of bed, and on the following day vomited several times. Since that time he had vomited all his food and had a profuse watery diarrhea. He was examined carefully and nothing abnormal was found, but he looked sick. During the following day he improved, but still passed a small quantity of bloody mucus. Eleven days after entrance he became restless, vomited in the evening and cried during the night. On the following day he vomited all his food, but had no motion excepting some bloody mucus. At 8 o'clock in the evening a tumor was felt in the left iliac region, and by 9.30 it extended down the whole side of the abdomen to the anterior superior spinous process. There was continued tenesmus and passage of blood and mucus. At 10.30 p.m., hydrostatic pressure from a fountain syringe held at a height of 5 feet was tried. The tumor immediately disappeared. It returned the next day in the same locality, and hydrostatic pressure failed to remove it. He was then transferred to the surgical wards, where on operation an intussusception of the ilium into the cecum was found, which had apparently existed for a long time as the layers were firmly adherent. A smaller and more recent one was easily reduced, but the larger resisted all efforts. The child died.

Dr. Huber mentioned a case in which a high rectal enema under moderate pressure allowed a good deal of water to enter, showing that the intussusception was high up. The water escaped, but the symptoms did not improve, and at the operation an intussusception three inches long was found at the ileo-cecal valve. In another case (to show the value of the passage of a slight amount of blood as a diagnostic sign) no tumor could be felt on examination under chloroform, but at operation an intussusception was found extending from the ileo-cecal valve through the ascending, transverse and into the descending colon.

Drs. Fruitnight and Winters spoke of the value of hydrostatic pressure, the latter, however, relating a case where, after reduction, the trouble returned, and the child quickly collapsed and died.

Dr. Jacobi spoke of the height from which hydrostatic pressure should be made, and mentioned $1\frac{1}{2}$ feet as the limit, and spoke of the danger of injuring the fragile intestines if too much pressure was used.

Dr. Rotch in reply did not advocate this method of treatment. If slight pressure failed, it should not be increased. Surgical opinion was strongly opposed to it, but medical opinion not nearly so much. In his case the axes of the two pieces of intestines happened to be the same, otherwise they would have been pressed more tightly together.

Book Review.

A Text-Book of Obstetrics. By BARTON COOKE HIRST, M.D.,
Professor of Obstetrics in the University of Pennsylvania.
W. B. Saunders, Publisher, Philadelphia.

Though there are many excellent works on obstetrics, and many of them new, there is still room for another, especially when it is written by one qualified by years of constant practice of his special line, as an attendant at the large hospitals, as a teacher in the clinics and as a lecturer and professor in the university, and as a consultant with a wide range of experience. In "*A Text-Book of Obstetrics*" the author has been able to find new and practical methods of writing, describing, and illustrating, which are both pleasing and eminently instructive. By omitting much of the padding so common in text-books, he has conferred benefits upon his readers. The straightforward brevity of his diction commends itself both to the student who is working up the subject and to the practitioner who wishes to refresh his mind by a study of the most recent and accepted methods. Where all is so excellent it seems almost presumptuous to criticise, but there are some points upon which we do not agree.

Regarding anesthesia his preference is for ether, which he says is "an efficient, convenient, and satisfactory agent." I have found it so only in a comparative way, and can only think that those who use it in obstetrical practice miss very much, as chloroform is so much more convenient, efficient, safe and satisfactory. In preventing perineal rupture its rapid action enables one to control violent expulsive efforts better than other agents.

In the chapter on labor there are many valuable hints, and his remarks on episiotomy, cutting the cord, after-pains, involution of uterus, mammary evolution, rest and quiet, urination, catheterization, etc., are especially worthy of perusal.

In treating the various faulty presentations, all is made very clear, both by words and by illustrations. If I would offer any remark it would be that I do not think that stress enough is laid upon the value of complete anesthesia whilst the position is changed by the hand in the uterus.

In the treatment of puerperal sepsis we have a very thorough and comprehensive view, and the subject of serum-therapy is thoroughly dealt with. He makes it clear that "the anti-streptococcic serum has no antagonistic power over other micro-organisms, and that the results of the serum-therapy for puerperal infection have not been, as yet, at all encouraging." On the whole the author has reason to be proud of having presented to the profession a book which is eminently practical, true and scholarly, one to be treasured amongst the leading works of the day.

Selections.

Serumtherapy in Malignant Endocarditis.

Moritz's *St. Petersburger medicinische Wochenschrift* says that the mortality in this condition is at least 80 per cent.; that all sorts of medications have been tried, but they all failed; he therefore determined to try the effect of antistaphylococcus serum. A case of typical endocarditis, with a temperature-chart resembling that of the malignant form, came under his observation, and injections were used. The man recovered so far as the pyemic symptoms were concerned, and it was noticed that after each injection of the serum there was improvement in the temperature.—*Univ. Med. Mag.*

Oil in Urinals.

It has been found that if urinals are coated with heavy oil, the urine leaves no traces or odor as it runs off (*Journ. d'Hygiene*). The 178 public urinals in Vienna are treated in this way, with satisfactory results, saving the city \$30 a year for the water supply of each. Many other European cities have already adopted the use of oil for this purpose. The urinal is scrubbed with a broom and plenty of water once a week or fortnight. When it is quite dry it is painted with thick mineral oil, obtained by distilling petroleum. Another system has a permanent syphon supply of oil.—*Journ. Amer. Med. Assn.*

The Menopause and the Kidneys.

Dr. Le Gendre (*Gazette des Hôpitaux*), as a result of many observations, concludes that the kidney is often affected by the menopause. In some women the menopause, or the diminution or retardation of the menstrual flow, is capable of producing a renal congestion of varying intensity, which manifests itself in different ways—sometimes by a diminished secretion of urine; at other times by slight albuminuria, or hematuria, lumbar pain, nausea, vomiting, and severe headache. Such symptoms can be relieved by diuretic treatment. If a chronic nephritis pre-exists, the menopause may cause the appearance of severe symptoms.—*Med. Record.*

Lactophenin as a Hypnotic.

A. Christiani (*Il Manicomio Moderno*) recommends the use of lactophenin as a hypnotic. He gives it in doses of from 15 to 45 gr. suspended in sweetened mucilage in the evening one

hour after food. He has employed it in over 200 cases of insanity accompanied by insomnia, and concludes that it has a hypnotic action which is certain, rapid, intense, prolonged, and harmless. The sleep which it produces is deep, calm and restorative, and lasts generally from four to nine hours. Its use is not followed by any unpleasant phenomena, such as headache and malaise. The drug has no cumulative action. It may be safely used even when the patient's physical condition is weak. Like other hypnotics it has failed to act in certain cases, and in some in which at first it was successful it has after a time entirely lost its power. He considers that it is the hypnotic *par excellence* in the insomnia of the insane, accompanied by serious involvement of the physical health in any form.—*Brit. Med. Journ.*

Instrumental Perforation of the Uterus.

Dr. H. Queisner (*Centbl. f. Gynäk.*) reports the following interesting case. Under anesthesia an adherent retroflexed uterus was freed from its adhesions and replaced in its normal position by the aid of the finger introduced into the uterine cavity. With the object of determining the depth of the uterine cavity a sound was passed, and found to enter a distance of four inches. The irrigating catheter of Fritsch was next inserted, and was easily pushed in for nearly two-thirds of its length. With the hand applied over the abdomen externally the point of the catheter was readily felt. There was no question of the existence of a perforation in the uterine wall. All further manipulation was suspended, the uterine canal was packed with iodoformized gauze, an ice-bag applied to the hypogastrium, and opium suppositories ordered. On the fifth day the patient left her bed and on the eighth day she was discharged after the introduction of a Hodge pessary.—*The Post-Graduate.*

Ehrlich's Diazo Reaction in Urine.

Krokiewicz (*Wiener klinische Wochenschr.*), after an examination of eleven hundred and five different cases, in which he made sixteen thousand one hundred and sixty-seven tests for Ehrlich's diazo reaction, draws the following conclusions: In diseases of the kidneys, not due to tonic medicaments containing coloring matters, it is never found. In carcinoma of the stomach, liver, esophagus, rectum, pancreas, and uterus the reaction is negative; but in primary carcinoma of the ovaries it is positive. When found in pulmonary tuberculosis the disease runs a short and fatal course. This rule holds good also in the incipient stages. Albuminuria and intestinal ulcers in phthisis have no effect on the reaction. The test is negative in

phthisis when complicated with nephritis. In tuberculosis of glands or mucous membranes the reaction is occasionally found. It is constant in miliary tuberculosis. In typhoid it is found in the mildest attacks in the first and second periods of the disease. As long as the diazo reaction is present in urine, typhoid patients cannot be considered convalescent. If in convalescence of typhoid the reaction sets in, it is generally a sure sign of a relapse. The author recommends the test on account of the prognostic value in typhoid and tuberculosis.—*Med. Record.*

The Anaphrodisiac Action of Thyroidin.

Anaphrodisiacs are not greatly in demand in therapeutics, though various drugs are known to exert incidentally a depressing effect on the genital functions. According to Dr. Riviere, of Lyons, thyroidin is one of the latter group, and he reports two typical cases of men who sought relief from exaggerated obesity in the thyroid treatment. They both lost weight very rapidly under the influence of the drug, but observed with surprise, not unmingled with apprehension, that the sexual function had fallen completely into abeyance. This condition persisted for some time after the cessation of the treatment, though the function was eventually restored. It is suggested that this "therapeutical castration" may possibly help to explain the inhibitory influence exerted by the gland on the growth of uterine myomata and especially on the hemorrhage which their presence occasions. On the same lines there is reason to believe that thyroidin may prove useful in the treatment of prostatic patients whose troubles are due to congestion of the genito-urinary apparatus.—*Med. Press and Circular.*

A New Parasite in Bloody Pleuritic Exudation.

Wilke (*Muench. med. Wochenschr.*) reports the case of a soldier admitted to the lazaretto, January 8th, 1898, the patient having been taken ill eight days previously. He complained of a cough, pain in the left side, loss of appetite, considerable debility, and had a temperature of 38° C. (100.4° F.) The physical signs of pleurisy with effusion were observed on the left side. These signs soon showed an increase of the effusion, and on the night of the 12th the patient was seized with a violent chill, the pain in the chest becoming at the same time much accentuated. Aspiration was performed on the 17th, resulting in the withdrawal of a thick purulent and sanguinolent exudate emitting an evil odor. On microscopical examination there was discovered among numerous leucocytes and bacillary organisms, a somewhat elongated body, in some instances presenting a rounded or fusiform enlargement at the

anterior extremity. These bodies traversed the visual field rapidly and with a serpentine motion. The movements were very quick and lively, but became slower little by little as the pus became cooler. Cultures of the organisms reacted only as streptococci. The author was unable to refer these parasites to any known species. He is satisfied, however, that they were not bacteria. Certain forms among them might be counted as spirilla, while those having enlarged extremities might be regarded as occupying a mean between the spirilla and the protozoa.—*The Post-Graduate*.

Iodide of Arsenic in Scrofula.

Dr. S. Saint-Philippe (*Journ. de Mèd. de Bordeaux*, June 10th; *Gazette hebdomadaire de Mèd. et de Chir.*, November 6th) recommends the following:

℞ Iodide of arsenic $7\frac{1}{2}$ grains;
Distilled water 750 minims.

M. Dissolve cold.

Five, ten, twenty or even thirty drops may be taken in divided doses through the day. Ten drops contain about fifteen one-hundredths of a grain (one centigramme.)—*N. Y. Med. Journ.*

Diuretic in Ascites and Edema from Bright's Disease.

℞ Copaiba resin gr. x.
Diluted alcohol ℥ xv.
Spirits of chloroform ℥ x.
Syrup of ginger ℥ xl.
Mucilage of acacia ℥ lxxx.
Water q.s. ad $\frac{3}{4}$ i.

—*Westminster Hospital*.

Prescriptions for Acne.

The following prescriptions are given in the *Klinische Therapeutische Wochenschrift*:

℞ Pure resorcin $\frac{1}{2}$ drachm.
Zinc oxide 40 grains.
Terra silica 7 grains.
Benzoated lard 2 drachms.

Apply to the part twice a day.

Or,

℞ Beta-naphthol $2\frac{1}{2}$ drachms.
Precipitate sulphur 2 ounces.
Vaselin and soft soap, of each 1 ounce.

This is to be rubbed on the face for fifteen or twenty minutes

daily and afterwards to be removed and the part dusted with talcum powder; or we may use,

R Precipitate ointment, 1 drachm.
 Subnitrate of bismuth, $\frac{1}{2}$ drachm.
 Ichthyol, 30 grains.
 Vaseline, 6 drachms.

Apply at night.

—*Therapeutic Gazette.*

"Surgical Interference" or "Surgical Intervention"?

We have never understood why authorities in surgery use the word "interference" when speaking of surgical or operative treatment. When a surgeon performs an operation for the correction of a deformity, the mitigation of pain or the saving of life, does he mean to say that he interferes? If it be interference, then he is culpable; but certainly no operator will plead guilty to the charge of doing meddlesome surgery, and the inevitable conclusion is that the term "surgical interference" is a misnomer. Whenever we read it in text-books, or in current literature, we feel like substituting the word *intervention* for "interference," using the word *intervention* in the sense of interposition, or, better still, mediation—a coming between for a friendly purpose. The word *interference* suggests the idea of collision, clashing, opposition, officiousness, intermeddling, etc. According to Webster, "A man may often *interpose* with propriety in the concern of others; he can never *intermeddle* without being impertinent or officious; nor can he *interfere* without being liable to the same charge, unless he has rights which are interfered with." Let us see what Trench has to say. We quote: "In our practical use, *interference* is something offensive. It is the pushing in of himself between two parties on the part of a third who was not asked, and is not thanked for his pains, and who, as the feeling of the word implies, had no business there; while interposition is employed to express the friendly, peace-making mediation of one whom the act well became, and who, even if he was not specially invited thereunto, is still thanked for what he has done." A few days ago we suggested the improved phraseology to two of our surgical friends, both of whom are teachers of surgery and liberal contributors to surgical literature. They agreed with us that the point was well taken, and announced it as their intention to adopt the suggestion. Speaking for ourselves, this journal will hereafter use the term surgical *intervention* instead of surgical interference, and we shall hope to see its general adoption by surgical writers.—*Richmond Journ. of Practice.*

The Canadian Practitioner and Review.

VOL. XXV. TORONTO, FEBRUARY, 1899.

No. 2.

Original Communications.

MALIGNANT DISEASE OF THE OESOPHAGUS.*

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It is not my intention to-night to take up exhaustively the whole subject of malignant disease of the oesophagus, but to show you specimens of special interest and of some rarity in connection with this disease.

The specimens are from a man, J. D., aged 36, who died on October 7th, 1898. He felt perfectly well until January last, when he first experienced difficulty in swallowing solid food. He vomited the first mouthful of food before a second could be taken; had pain at lower end of sternum and in the back. In May he was able to swallow liquid food only, and he was getting progressively weaker and losing flesh rapidly. I first saw him on August 7th, when his condition was as follows: Much emaciation, anxious expression, complaining of pain at lower end of sternum and in back over eighth and ninth D. V. Liver was enlarged and painful on palpation. Liver dulness (absolute) from sixth rib to one inch below costal margin in mammary line. No nodules felt. Nothing bearing specially on the case in the respiratory, circulatory or urinary systems.

An oesophageal bougie was passed (No. 22), and an obstruction was met with $16\frac{1}{4}$ inches from the teeth. There was no blood on the bougie after removal, nor in the mucus afterwards expectorated. On listening with a stethoscope over ninth D. V. while patient swallowed water, the water could

* Read before Toronto Clinical Society.

be heard for some seconds dropping into the stomach. He continued able to swallow liquids until his death, October 7th, 1898.

Autopsy.—Great emaciation. Omentum thickened at lower border with numerous small whitish nodules throughout it. Right lung adherent. Both lungs showed emphysema and collapse of lower lobes. Heart; eight ounces, valves normal, coronaries dilated and tortuous, some small thickened patches in visceral pericardium, even thickening of the endocardium, brown atrophy of the heart muscle. Spleen; enlarged, pulp increased and dark in color. Kidneys, both normal. Ureters and bladder, normal. Œsophagus; apparently normal in upper $2\frac{1}{2}$ inches, from this down, small papillomatous growths are seen on the mucosa, larger posteriorly. These extend in a scattered way down to the cardiac extremity, varying from one-eighth to one inch, and are approximately oval in shape. The free surface is distinctly shaggy. At the cardiac extremity large masses of growth nearly surround the lumen and project inwards, almost closing the passage. The wall of the Œsophagus is thickened and densely fibrous in the lower inch and a half of its extent. These growths are hard, firm and solid throughout. Stomach inflamed; veins large and tortuous, walls thickened, capacity diminished. Lesser curvature and anterior surface of stomach adherent to under surface of liver. A large gangrenous ulcer on anterior wall extending to lesser curvature. This ulcer corresponds to the adherent part of the stomach. Adhesions between stomach and liver torn during manipulations, and two large openings made in stomach wall. Although cardia shows no gross signs of disease, microscopic examination demonstrates infiltration with the growth from the Œsophagus. Duodenum—mucous membrane and peritoneal covering normal. Nodule one-fourth inch in diameter in duodenal mesentery. Mesenteric glands enlarged and very hard, many of them infiltrated with lime salts. Numerous small nodules on the under surface of the diaphragm. Pancreas firm, suprarenals normal. Cæcum, colon and appendix—glands hard and enlarged; appendices epiploicæ enlarged; a hard nodule in wall of cæcum close to ileo-cæcal valve; hard solid enlargement of the tip of the appendix. Liver enlarged, surface nodular, mostly small nodules, largest being about three-fourths of an inch in diameter, many nodules umbilicated; section of liver—congested, solid, studded with white masses of various sizes up to three-fourths of an inch in diameter. The masses seem to be distributed along the course of the portal vessels. Gall-bladder contains bile, duct patent, small growths in wall of gall-bladder and also along the duct. Microscopic examination of the growth at the lower end of the Œsophagus showed it to be a glandular carci-

noma, having its origin in the mucous glands of the œsophagus. Sections were made of (1) the nodules higher up in the œsophagus, (2) the stomach at the edge of the ulcer, (3) the liver, (4) the mesenteric glands, (5) the tip of the appendix, (6) the nodule in cœcum, (7) diaphragm, (8) cardiac end of stomach, and they all showed the same type of growth—a glandular carcinoma. A glandular carcinoma (or cylindrical-celled or columnar epithelioma, or adeno-carcinoma or malignant adenoma—all of which terms are now considered as synonymous) is a very rare form of growth in the œsophagus. Butlin states that 90 per cent. of all tumors met with in the œsophagus are squamous-celled epitheliomata. J. P. Arnold, in reporting a case of squamous-celled epithelioma of the œsophagus in the *International Medical Magazine* recently, states that this is the form of carcinoma invariably met with in the œsophagus. My case and others that have been reported show that his assertion is wrong, and that glandular carcinoma does occur in the œsophagus although very infrequently. The primary seat of the disease is undoubtedly in the lower end of the œsophagus, and the feature of special interest is the occurrence of secondary growths of the same type, both upwards and downwards along the alimentary canal. In the case of the œsophagus the secondaries higher up might be due to epithelial cells or parasites being carried up with food vomited, or the growth might be disseminated along the lymphatics against the lymph stream, a possibility which is now generally accepted.

In considering the secondary growths in the stomach, cœcum and appendix, there are at least four ways of explaining them: (1) that epithelium has been carried from the growth with the food; (2) parasites carried from growth with the food; (3) dissemination by lymph stream; (4) dissemination by blood current. Then again the disease may have extended from the œsophagus directly by continuity into the cardiac end of stomach and along the lesser curvature, and from here into the liver and throughout the liver by the portal circulation.

ACUTE PANCREATITIS, WITH HEMORRHAGE AND FAT NECROSIS.

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AND

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So little, comparatively speaking, is generally known, as yet, of the morbid conditions occurring in the pancreas that no excuse seems necessary when recording cases observed.

Amongst recognized diseases of the pancreas, apart from neoplasms, hemorrhage and inflammation are perhaps the most important.

Hemorrhage into the pancreas is, on all hands, admitted to be the cause of death in a series of cases, in some of which the end of life comes suddenly, almost instantly, whilst in others the patient succumbs after an illness of, at longest, a few hours' duration. A satisfactory explanation of the occurrence of pancreatic hemorrhage, unaccompanied by inflammation, has not yet been brought forward. Vascular changes have been spoken of, but not proven; aneurysm, whilst naturally suggesting itself, has not been shown to exist. Fatty changes in the gland itself and a nervous origin have also been suggested.

Pancreatitis may be primary or secondary, the latter variety occurring in the course of pyemia when it is suppurative, or, as the result of a new growth, carcinoma most commonly, or calculus.

Instances of primary pancreatitis are so rare, or, at any rate, so infrequently recognized during life and proven by *post-mortem* examination, that the number of them throws but little obstacle in the path of the student; on the other hand, the paucity of reliable and complete records renders accurate study and classification a matter of considerable difficulty.

The most exhaustive analysis of such cases that has yet been brought before the medical profession is to be found in the monograph on acute pancreatitis, by Dr. Fitz, of Harvard University, being the Middleton-Goldsmith lecture for 1889.

Dr. Fitz, as a result of his investigations, not only of all recorded cases which he has been able to find, but of the relatively large number which he has been fortunate enough to have seen, classifies those showing inflammation under the heads: hemorrhagic pancreatitis, suppurative pancreatitis, and gangrenous pancreatitis. Any one of these forms may be accompanied by fat necrosis, in which disseminated nodules of necrosed fat, varying in size, are to be found scattered through the fatty deposits in the omentum, mesentery, subperitoneal tissue, and around and within the pancreas itself.

Acute pancreatitis is to be described anatomically as consisting in "degenerative changes in the parenchymatous cells, or exudation in the interstitial tissue, or both these factors" (Fitz).

In all acute infectious diseases the parenchyma of the pancreas, as of other glands, may be more or less affected by changes embraced under the name of cloudy swelling, which are supposed to be the initial stages of parenchymatous inflammation. In the class of cases under consideration at present, however, the changes are much more marked, and the interstitial processes are, no doubt, a large part of all instances of "genuine acute pancreatitis."

With regard to causation, acute pancreatitis is said to result in many cases from an "extension of a gastro-duodenal inflammation along the pancreatic duct." It may also depend upon hemorrhage, or be the cause of hemorrhage. In the following case the hemorrhage evidently accompanied or resulted from the inflammation, and did not cause it. No inflammatory process could be traced from the duodenum.

One of the most interesting, and at the same time difficult, problems in these cases is that of the accompanying fat necroses. Bacteria have been found in and around the necrotic patches by Chiari, and, as will be seen further on, the reporters of this case have also to speak of micro-organisms seen; but it is extremely doubtful whether these are more than accidental contaminations of the tissue. No proof can be offered of a causal relationship.

Balser concluded from examination of several cases of various diseases in which fat necroses existed along with other morbid conditions, that an *excessive growth* of fat cells may cause death of fat and be associated with hemorrhage, either the necrosis or hemorrhage causing the death of the patient. Such an explanation can be of no effect in the case we are to report, since the amount of fat present was by no means excessive in any part of the body, and, moreover, Virchow thought that the changes spoken of by Balser as fat necroses were merely cadaveric, as proven by the absence of any vital reaction in their neighborhood.

Robert Langshans, of Berlin, in a contribution to the *Festschrift*, dedicated to Virchow in honor of his seventieth birthday, describes a series of experiments made by him upon dogs and rabbits with the object of determining whether or not ferments derived from the pancreas itself could give rise to fat necroses. His procedure in conducting these experiments was quite simple, consisting in the injection into adipose tissue in the animals used of a watery solution of pancreas rubbed up in a mortar with fine glass. The results of twelve such experiments are tabulated, and in one only (a rabbit being the animal used) was any satisfactory conclusion reached. In this case fat necrosis, similar to that seen in cases of pancreatitis, was observed and fully described. Langshans has since undertaken a new series of experiments in the hope of confirming and con-

cluding what has already been done; but meanwhile we are justified in considering his single successful result as at least very suggestive.

The following case is one of pancreatitis, with hemorrhage and fat necrosis:

Dr. Oldright was called to see Miss H. during the forenoon of Monday, October 5th, 1891, the message indicating that she was in severe pain, afterwards found to be referred to epigastrium. The intensity of the pain may be inferred from the fact that two messages were sent within fifteen minutes. On questioning it was found that the patient, in addition to an ordinary breakfast, had eaten a number of grapes, swallowing the skins. A diagnosis of acute dyspepsia was made and treatment to suit ordered, a small dose of morphine being given with other remedies. Within an hour and a half the physician was summoned again, the epigastric pain having become very intense, and being described now as passing through the back and up under the shoulder blades; vomiting had occurred, a quantity of grape skins constituting part of the vomited matter. A hypodermic of morphia was given to relieve urgent symptoms, and purgatives prescribed in order to clear the alimentary canal; at this time also a purgative enema was administered, with little result. During the next twenty-four hours opiates and carminatives were administered and counter-irritants and fomentations applied externally. On Tuesday afternoon the patient appeared much better, and so far no rise of either pulse or temperature had been observed, but towards the evening the temperature rose to 101° F., and the radial pulse beat 100 to the minute; continued pressure over the lower part of the abdomen disclosed tenderness; treatment, opium in large doses and hot fomentations. On Wednesday morning the pain had subsided to a great extent, but nausea was marked. Opiates were now omitted and purgatives again administered—calomel, Seidlitz powder, and enemata. Bowels were moved thrice between 12 o'clock a.m. and 3 o'clock p.m., many grape seeds and skins passing. Shortly before 3 p.m. the physician was sent for, the report being that the patient had lost the use of her limbs. This motor paralysis was found to be complete in the arms and partial in the legs. Sensation also was impaired, more noticeably in the right arm than elsewhere. Hysteria from exhaustion was suspected, and a consultation asked for. About 8 o'clock p.m. Dr. J. E. Graham saw the patient with Dr. Oldright. The condition then was about the same as before; pupils, normal; pulse, fifty beats to the minute; muscles of neck paralyzed; sphincters, all right; patellar reflex was not obtained, but the test could not be made satisfactorily; no reflex gagging occurred on tickling the fauces; no paralysis of muscles of face or tongue; voice like that of a person with

swollen tonsils; no albuminuria. The patient was then moved into a larger room, and was immediately seized with a severe epileptiform attack, which threatened suffocation, there being much spasm of the facial muscles. This convulsion was limited to the face and neck. Soon afterwards she seemed more comfortable. Pot. brom. and asafetida were given by the mouth and rectum. At the request of her friends, Dr. A. J. Johnson was now called in consultation, meeting Drs. Graham and Oldright about 11 o'clock p.m. Drs. Graham and Johnson left about midnight. Shortly afterwards Dr. Oldright left the sick room, going downstairs; he had been seated but a few minutes when the nurse came down to ask a question, received her answer, went upstairs and immediately called the doctor, who, on reaching the bedroom, found the patient dead. A friend in the room said she had been seized with a convulsive attack similar to the one described above and died in it.

The family history in this case is good in all respects, and throws no light upon it.

Post-mortem examination of the body was made next morning about twelve hours after death.

Report: Inspection shows the body of a female of apparently about thirty years of age; nutrition very good; *rigor mortis* well marked; *post-mortem* staining well marked in usual positions; external orifices all right.

Section: Shows a large amount of subcutaneous and sub-peritoneal fat; muscle in good condition; omentum presents numerous yellowish white nodules, varying in size from that of an ordinary bean downwards, in which, on cutting them open, whitish spots like caseous matter are found—these were at first supposed to be tubercles; mesenteric glands are enlarged and some show central opaque whitish areas as from necrosis; all the abdominal viscera exhibit marked venous congestion, but, with the exception of the pancreas, appear otherwise healthy; the thoracic viscera are in very good condition; heart contains fluid blood and no clots.

Pancreas: Much larger than usual in cross measurement and also thickened; the capsule is tense and distended over the parenchyma by a reddish fluid, and here and there upon the surface yellowish spots similar to those in the omentum are to be seen; similar spots are noticed in the peripancreatic tissue. On cutting into the organ a quantity of blood at once oozes from its surface, the whole tissue seeming to be soaked with it. Closer inspection shows that the blood is diffused through the interstitial tissue and underneath the capsule, but does not apparently invade the parenchyma. At no point is a clot visible. No ruptured vessels can be found, nor are there macroscopic changes noticeable in the vessels anywhere in the

body. The brain and spinal cord also were carefully examined, and appeared to be in a perfectly sound condition.

Microscopic Examination: Parts of the pancreas, mesenteric glands, and omental nodules were submitted to microscopic examination, with the following results:

(a) *Pancreas:* The interstitial structures show considerable infiltration with blood, the capsule, subcapsular tissue, and interlobular bands near the surface being by far most affected. No changes can be made out in the vessel walls, but they are crammed with blood corpuscles; the stripping off of the endothelium of the arteries is very remarkable, the cells being mixed through the clotted blood in the vessels. The capsule is also in places considerably infiltrated with inflammatory cells. In the fat tissue in the neighborhood of the capsule and adherent to it are necrosed patches similar to those described below, and even the fat which is not otherwise affected shows marked small cell infiltration. In the interlobular tissue, acute inflammation is in process, as indicated by round cell infiltration, but this is patchy. The parenchyma of the organ in parts presents areas of cell necrosis without definite signs of inflammation; in others merely cloudy swelling; whilst in others round cell infiltration is so dense as to completely destroy lobular structure. At no place can abnormal collections of fat be seen in the pancreas. The condition, then, is one of acute interstitial and parenchymatous pancreatitis, with hemorrhage and necrosis. No blood appears *within* the lobules.

(b) *Mesenteric glands:* Swollen; dense small cell infiltration of periphery, with central necrosis, the necrotic areas being quite soft in the gross specimen.

(c) *Omental nodules:* These are seen on examination to consist of greatly modified fat tissue. A division into two zones, and in some cases three, can readily be made out. In the central and middle zones the cells retain their outline fairly well, and can generally be accurately delimited with the eye; in the outermost zone, in parts, only granular debris infiltrated with inflammatory corpuscles can be recognized. In many of the fat cells of both inner zones the cell contents are collected into a large globule located centrally in the cell, with either clear areas or granular matter surrounding; in many instances these globules are of a marked bright yellow color. The cells of the central area, as a whole, stain with carmine much more feebly than those of the middle zone, although both stain markedly enough. Taken from centre to circumference the cell contents can be better described as finely granular than otherwise, some being completely filled out, others only partially so. Fat crystals are to be seen in a few of the mid-zone cells, but not generally. The zone of the inflammatory reaction is narrow, as compared with the size of the whole nodule, and

composed in large part of granular débris, leucocytes, and proliferated, connective tissue cells. In a few spots fat cells have broken down and collections of free oil globules are visible. This has happened near the outer zone. Staining for the bacillus tuberculosis gives a negative result, treatment of sections with methyl blue only shows numerous small rods, occurring singly or in pairs, scattered through the inflammatory zone, but very few being seen in the central areas. These rods vary considerably in length (4 to 10 *m.*), free individuals being longer than the articles of a pair. In single rods the ends are rounded. Spore formation is noticed in the longer rods. No micro-organisms have been seen in the pancreatic sections. Attempts at cultivation have failed.

[This paper appeared originally in the *Canadian Practitioner*, May 2nd, 1892, and has been republished by request. So far as we can ascertain on consulting the literature on the subject, this is the first case of acute pancreatitis reported by a Canadian.]

CLEANSING SOLUTION FOR THE NASAL PASSAGES.

BY G. C. STERLING RYERSON, M.D., L.R.C.S. (EDIN.,) TORONTO.

The progress which has been made during the past two or three decades, and which is still being made, is a frequent subject of remark and congratulation. In no branch of medicine has greater progress been made than in rhino-laryngology. In so simple yet important a matter as a nasal cleansing solution progress has been made. The sole solution at hand was Dobell's, a solution which experience taught was agreeable to the throat, but which was somewhat harsh and irritating to the nose. Sometime during 1884 I devised the following solution, which was made for me by Mr. W. Lloyd Wood :

R. Sodæ bicarb.,	
Sodæ biborat.,	
Sodii chlorid.....	āā gr. xxx.
Sodii salicylat	gr. xl.
Ol. bergamot	℥iii.
Listerine	℥ ss.
Glycerine	℥ i.
Aq. destil. ad.	℥ viii.

It is contemporaneous with Seiler's formula, but was devised without knowledge of his solution, from which it differs in several essential particulars. I have used this solution continuously ever since with satisfactory results. I commend it to the attention of the profession.

60 COLLEGE STREET.

THE GENERAL PRACTITIONER.*

BY CHAS. MERRILL SMITH, M.B., M.C.P.S.O., ORANGEVILLE.

It is not my intention to give a dissertation on the general practitioner of ancient, mediæval, and modern times, but rather to confine myself to a few salient points which have presented themselves to me, illustrating our present condition.

Like the Gaelic "meenister," who, when he took as his text the words, "The devil goeth about like a roaring lion, seeking whom he may devour," divided it into three parts as follows: (1) Who the devil *he* was; (2) What the devil *he* was doing; (3) What the devil *he* was roaring about. I shall treat my subject under three heads, namely: (1) What he (the general practitioner) was; (2) What he is; (3) What he might be; in other words the *fuere*, the *esse* and the *posse*. I have neither the time nor ability to sketch the fathers of medicine, mythical and real, but will merely name Æsculapius, the pupil of Chiron, and his sons Machaon and Podalirius, of whom Homer wrote in song:

"Of two great surgeons, Podalirius stands
This hour surrounded by the Trojan bands,
And great Machaon, wounded in his tent,
Now wants the succour which so oft he lent."

—thus showing that in those days as in our times the "non-combatants," as our supercilious British officers call the medical staff, did not flinch from their duty in the midst of danger. Neither shall I regale you with the histories of Hippocrates, Galen, Avicenna and Celsus, but will refer you to character sketches of the more modern physician to Shakespeare and Dickens, whose brilliant pens have immortalized the family doctor.

The great dramatist tells us in "King Lear" how disease was sold dearer than physic, as it is also in our day; for is there one here who does not know that the scoundrel who has given his last five-dollar bill to get a malady will spend \$30 in trying to evade payment of \$20? While the novelist caricatures certain types of Drs. Suneby, Jeddah, Blanik, Kurtancun, Prof. Muff and the Charlatan Marigold, the reader will observe that due honor was paid to the studious, hard-working, faithful family physician, the friend and confidant of the household, whose words of hope and cheer were ever ready, as, guided by his skill and devotion, the children were led from infancy to childhood, from youth to man's estate and womanhood.

In comparatively recent times there stand out in noon-day brightness the names of Sydenham, Simpson, Hunter, Jenner,

* Read before the Dufferin Union Medical Society at Shelburne, December 30th, 1898.

McDowell, Atlee, Peaslee, Sims, Lawrence, Watson and hundreds of others which have been blazoned on the scroll of Fame.

Ian Maclaren has with burning pen told of one who was, I am proud to say, but a type of the true physician. Then, as now, the family doctor rode through mire and mud, turned night into day and risked limb and life in efforts to succour the sick, heal the helpless, and aid the mother in her agony. What were his rewards? Were they, as in the days of Hippocrates, garlands, gifts and works of art sublime, such as the golden statue presented by the people of Argos? I trow not. In many cases, I am safe in saying, he was paid as now, with wood short in measure and *queer* in quality, or hay heavy with a night's rain, having been loaded the previous evening and left out to get the dust laid properly! But while the old family doctor had a wide field in which to practise, and the whole of the human anatomy to keep in repair, the practitioner of to-day not only has to contend with our crowded ranks, but has his share of the *corpus* (not corpse), so narrowed down by the eye and ear specialist, the nose and throat, the thoracic, the genito-urinary, the orthopedic, the nerve and rectal specialist, the gynecologist, and dermatologist, that nothing will shortly be left but the umbilicus, and even that may be claimed by the laparotomist.

We are to-day, to use a Darwinian phrase, "the victims of an untoward environment," a pauperizing paradox. The State calls upon us for statistics and gratuitous services in sanitary matters and preventive medicine, gives grants to hospitals instituted primarily for a charitable and noble purpose, but now affording free or nearly free medical and surgical aid to people, who, though well-to-do, are mean enough to claim the privileges of paupers.

Among the other leeches that suck the life-blood of the general practitioner are the patent medicine vendors, the manufacturing chemist, and, shall I say it, yes, the repeating and prescribing druggist or pharmacist as he now calls himself. When formerly each member of the family would, on some occasion, consult the doctor, now the old man either takes K. D. C. or Warner's Safe Cure, or hies away to a hospital and gets put to rights at the rate of \$14, \$12, \$8, \$6 or \$2.80 per week according to his ability to lie about his worldly circumstances. The old lady takes Celery Compound, or drops into the hands of the gynecologist, the son takes secret remedies for secret vices, G. and G. or Cr. and C. Capsules, while the daughter takes Pink Pills for Pale People, or perhaps sits at the feet of that princess of modern fakirs, the Christian Scientist, paying therefor the modest fee of \$100 for a brief term.

Instead of fees, he (the general practitioner) frequently gets

fevers; instead of glory he gets gray, "but not with years"; instead of reward he gets rheumatism, and contracts pneumonia and sciatica in lieu of acquiring a comfortable livelihood. I have briefly glanced at the *esse* without mentioning the serious condition of toxemia in the *corps medicale* itself, which requires a vigorous flushing out of the *primæ viæ*.

Agitate and unite, unite and agitate. Concerted action, as to our rights, regarding Dominion registration, the duties of municipalities towards the indigent sick, State aid to preventive medicine, and original investigations would give to our much abused vocation that status which it deserves. Look at our legal friends in parliament, and their name is legion. Do they confine their energies to the interests of their individual constituencies? No! each and all labor to make the practice of law more indispensable to the citizen and lucrative to themselves. The soldier fighting for his country and slaying her enemies is recognized by his Queen and her Viceroy, and just and right is it that such should be the case; but did you ever hear of pensions, K.C.B's., or K.C.M.G's., being bestowed on any one of the host of our confreres who have become disabled during their efforts to preserve the lives of Her Majesty's subjects? or can you point to families of those who have suffered martyrdom through fatal contagious affections, and say our country has done its duty towards her defenders? for such indeed are they whose

... "true ambition there alone resides,
Where Justice vindicates and Wisdom guides;
Where inward dignity joins outward state,
Our purpose good as our achievement great;
Where public blessings, public praise attend,
Where glory is our motive, not our end.

And such is human life, still gliding on;
It glimmers like a meteor, and is gone,
What higher aim can man attain,
Than conquest over human pain?"

Clinical Notes.

NOTES OF CASE OF ALBUMINURIA COMPLICATING PREGNANCY.*

BY J. D. BALFOUR, M.D.,
Superintendent London General Hospital.

Elizabeth P., Canadian, aged 21, fair complexion and red hair. Admitted to the General Hospital on September 29th, 1898. When admitted she could scarcely walk, was very pale, and suffered from dyspnea. Had to be carried upstairs. Her whole body was edematous from her feet to her hair. The limbs were three times their natural size, but the edema was most marked in her breasts, abdominal walls, and face. It was the worst case of general anasarca I ever saw. She had a large goitre as big as two fists, which she said commenced over a year ago, and which increased rapidly after she became pregnant. She was about seven months pregnant when admitted.

The urine was scanty, about fifteen ounces in the twenty-four hours, cloudy, acid, specific gravity 1026, became nearly solid with albumen when boiled; epithelial casts were also present; severe headache and insomnia were prominent symptoms.

The patient was confined to bed, put on milk diet, a hot bath every day, with full doses of the tincture of iron, combined with small doses of arsenic. Pill rhei comp. was used to procure daily motions of the bowels. This line of treatment was continued for two weeks, when the patient had improved so much as to be allowed to leave her bed, the iron mixture being still continued. By this time the edema had disappeared, except in the breasts, in which it remained till after her confinement.

From October 14th until November 14th, a period of one month, she was up around in the daytime, was quiet and inclined to brood over her trouble, but was fairly comfortable. During this time she was allowed milk, broths, beef-tea, custards, bread puddings, etc. The urine remained scanty, however, with high specific gravity, and about one-fourth albumen. She was unable to sleep well, and a dry hacking cough caused her a great deal of annoyance, and the least exertion tired her out.

On the morning of November 14th she exhibited well-marked symptoms of Bell's paralysis of the face—left side; the next day one of the oblique muscles of the eye was affected, and she had double vision—all, as I take it, toxic in origin. The edema now began to show itself again; frequent micturition

* Read at December meeting of London Medical Association.

and bearing down pains also were in evidence. Fearing an outbreak of eclampsia at this time she was again put on milk diet, and her bowels, kidneys and skin actively acted upon.

At this time some blood was found in the urine. She was delivered on November 23rd, at 11 a.m., but the day before she had a temperature of 100 degrees, pulse 118, foul breath, and sordes on the teeth, urine thick and scanty. She was in labor for sixteen hours, and finally the application of the forceps was necessary to deliver the child, the mother having become completely exhausted. After delivery the fourchette was found to be torn, and there was also a slight laceration of the lower back part of the vagina, no doubt caused by the instrument.

The usual toilet after modern methods was made. The next day after confinement the temperature became normal, pulse 100, and everything went well until the evening of the sixth day when the patient had several chills, and on the following morning the temperature reached 104 degrees. Then followed one week of a mild type of bed fever with its ups and downs, principally ups. On the 29th of November—that is, at the commencement of the fever—the urine showed the following analysis: acid, specific gravity 1036, urates in excess, albumen one-half, thick and cloudy.

Present condition: On December 7th urine as follows: acid, specific gravity 1020, albumen one-tenth, high-colored, urea 2.9 per cent. Temperature normal. December 10th—urine acid, specific gravity 1018, albumen one-tenth, urates in excess, cloudy and high-colored. Temperature 100 degrees, still weak, but convalescing slowly. She is troubled sometimes with a cough, but I can find no signs in the lungs of impending phthisis. Is still confined to bed, appetite poor, and no ambition. The paralysis has almost disappeared.

This case, I believe, is an example of a class which in our time is far too numerous. A young girl becomes pregnant, feels herself disgraced and leaves home, has neither money nor friends, is neither fed nor cared for properly. Under these conditions she is unable to sustain the extra amount of work thrown upon the system which becomes impoverished; her blood becomes hydremic, which I think is the first pathological lesion, and the other diseased conditions, including the affection of the kidney, follow. Should such a person again become pregnant under favorable circumstances albuminuria would not likely return.

The peculiar features of the case are the presence of a large goitre, which since her confinement has decreased in size about one-half; the extensive kidney lesion, as shown by the great quantity of albumen, casts and blood; the excessive amount of edema at seven months over the whole body; the toxic paralysis; the fortunate escape from an attack of eclampsia; the unfortunate advent of bed fever.

CASES IN PRACTICE.

BY JAMES E. GRAHAM, M.D.,
Professor of Medicine Toronto University.

Cerebro-Spinal Meningitis.

Ward 21, Toronto General Hospital. Admitted December 27th, 1898. Died December 27th, 1898.

History.—R. S., aged 50. Family history negative.

Personal History.—Laborer at G. T. R. shops. Good habits. Always strong and healthy. No history of ear disease. Was at work on Friday, December 23rd, apparently in perfect health. Woke at four o'clock Saturday morning, and complained of severe pain in the back of the head, greatest on the right side. This pain was of a sharp, shooting character, and at times extended into the right temporal region and down the neck. Was very feverish, and refused his food. The pain continued and increased towards evening. Seen by Dr. Noble Saturday evening. Temperature, 103; pulse, full and frequent; face flushed. Complained of severe pain in back of head and neck. Passed a very restless night, and vomited frequently, but brought up very little from his stomach. The pain continued throughout Sunday, but the vomiting was not so frequent as during Saturday night. Sunday night, very severe pain in back of head and neck; very restless; threw himself from side to side in bed; twitching of arms and legs; did not sleep. Monday passed with an increase in the severity of the pain and greater restlessness. Monday night, became delirious; tried to get out of bed when he was left alone; tumbling and twitching of arms and legs.

Admitted to hospital Tuesday morning. Temperature, 103; pulse, 124; respirations, 42; face flushed; head turned towards left side; stiffness of muscles of neck; irregular movements of eyes; pupils dilated, react slightly to light; irregular contractions of muscles of arms, legs, face and thorax; knee-jerk increased on both sides; ankle clonus present on both sides. Sensation—hyperesthesia. Pin pricks caused contraction of muscles of arms and legs. Died Tuesday night, December 27th. Before death, temperature, 103½; pulse, 150; respirations, 60.

Autopsy.—By Dr. J. Caven, December 28th, 1898, 3 p.m. Nutrition fair. *Post-mortem* staining in dependent parts; rigor mortis marked; orifices normal. Fat, deep yellow color; muscle, dark red; very little fat in omentum; no peritoneal adhesions; no fluid in peritoneal cavity; no pleural adhesions; no excess of fluid in either cavity; about 1 oz. clear fluid

in pericardium; no adhesions. Heart, $10\frac{1}{2}$ oz.; muscle, dark red in color; left ventricle slightly hypertrophied; coronaries show commencing atheroma; a.m. and p.m. clot in left ventricle; slight atheroma of mitral valve; other valves normal. Lungs—Left, $17\frac{1}{2}$ oz.; right, $15\frac{1}{2}$ oz. The bronchi contain considerable muco-pus; in both lungs also some slight emphysema and collapse; edema of lower lobes. Spleen, 3 oz., dark colored, fairly firm. Kidneys—left, $5\frac{1}{2}$ oz.; right, 5 oz.; capsules, non-adherent evidences of cloudy swelling. Bladder, very thin-walled and distended. Stomach, many sub-mucous hemorrhages (venous?). Large Intestine—appendix; end hanging free over brim of the pelvis; sub-cecal and ileo-cecic pouches well developed. Liver; fatty patches on surface—wedge-shaped—extending into liver substance; organ fatty throughout; patches of perihepatitis; weight, $54\frac{1}{2}$ oz. Brain and membranes: general basal meningitis; thick purulent exudate in subarachnoid space. About the pons and medulla it is very thick and pretty evenly distributed. It is thick along the sylvian fissures, and extends over the cerebral cortex in the sulci. The vessels injected, and some capillary hemorrhages. Ventricles; no fluid: choroid plexus congested; cortical grey matter degenerated in some parts where exudation is thickest. Spinal Cord—dura distended with thick purulent exudate. Exudate also general throughout subarachnoid space. Vessels injected, and there are numerous capillary hemorrhages.

(Reported by Mr. Tanner.)

Tumor of Spinal Cord.

Toronto General Hospital. Admitted November 7th, 1898. Died December 7th, 1898.

History.—R. D., aged 67. Negro. Mother died at 30—(tuberculosis?). Family history of rheumatism, no history of new growth. Plasterer and bricklayer by occupation. Hard worker. Smoked a great deal. Never drank to excess. Had gonorrhea, but no symptoms of syphilis. Rheumatism since he was quite young. Had many accidents, but said he never injured his back. For past two years had to use a catheter, and to remedy this had both testicles removed, but with no effect. Had pain in the back for two years. Towards the end of September, 1898, he complained of severe pain in the back and hips accompanied by weakness in the legs. This pain continued. About two weeks previous to admission to the hospital he complained of a girdle sensation at about the junction of the dorsal and lumbar regions. At this time there was complete loss of power in the lower extremities.

Entered the hospital, November 7th, 1898. Paraplegia. Sensation much impaired below Poupart's ligament. Distinction

between heat and cold poor in lower limbs. A hot tube passed along the spine caused considerable pain at level of tenth dorsal vertebra. Herpes zoster on left side in fourth intercostal space. Urine had to be drawn off. Knee-jerk present, plantar reflexes present. November 11th.—No knee-jerk, no plantar reflexes, sensation very slight. November 15th.—Bed-sores forming on left tuber ischii and on left heel; loss of knee-jerk; loss of plantar reflex; complete loss of sensation in lower extremities; urine dribbles away; rectal sphincter good; abdomen distended and tympanitic; legs flaccid and muscles very flabby, but no marked atrophy; feet cold; culture from blood negative; continued as above until death on December 7th; anal sphincter always under control; loss of sensation extended up to three inches below umbilicus.

Post Mortem.—Bed-sores over sacral prominence, left ischial tuberosity and on left heel; largest sore over sacral prominence, $2\frac{1}{2} \times 2\frac{1}{2}$ inches; body darker in color below level of tenth dorsal vertebra. Heart: 11 oz.; brown atrophy of muscle; coronaries tortuous and thickened; edges of aortic valves slightly calcareous, but the other valves normal; blood dark in color and clotted. Lungs and pleura: old adhesions at right apex, no fluid in right pleural cavity, 12 oz. in left cavity, adhesions; edema and hypostatic congestion of lower lobes; emphysema of upper lobes; left lung 30 oz., right lung 20 oz. Kidneys: capsules non-adherent, relation of cortex to medulla reduced; numerous small cysts in both kidneys. Stomach: atrophied and thickened; small intestine normal; large intestine distended. Brain and membranes: brain weighed $41\frac{1}{2}$ oz.; membranes adherent to skull; vessels congested; no softening. Spinal cord: commencing at the level of the tenth dorsal vertebra the dura was strongly adherent to the spinal canal for three inches down the cord. At the level of the eleventh dorsal vertebra there was a small tumor attached to the dura and surrounding a nerve trunk. The growth was $\frac{1}{2}$ inch in length, hard, and projected into the canal, compressing the cord. There were also some small nodules on the dura adherent to the right side of the canal at the level of the twelfth dorsal vertebra.

Microscopic examination of the tumor: Composed of fibrous tissue and nerves bundles, the fibrous tissue forming the greater bulk of the mass. The cord was constricted opposite to tumor, and microscopic examination showed degeneration of the central grey matter and also of the white matter.

A CASE OF OTITIS MEDIA WITH PURULENT MENINGITIS.

BY DR. H. J. HAMILTON.

Patient—H. W., admitted to Toronto General Hospital under the care of Dr. W. H. B. Aikins; male, aged 32 married. Had four children. Worked as a salesman. Used tobacco and drank heavily. Had pneumonia in February, 1898, and enteritis three years ago. On the night of December 24th he complained of some earache which passed off in a short time, and did not prevent him from working during the next week. One week later, or about midnight on Saturday, December 31st, he went to bed feeling as well as usual, having worked all day and attended a banquet at night. In a short time he awoke with a most severe pain in the right ear and right side of the head. On the next day, Sunday, January 1st, there was a discharge of blood and pus from the right ear. He also complained of pains in the back of the neck, and great headache and some vomiting.

Was admitted to the hospital on January 9th; was delirious on the preceding day, and has continued so since. Very restless, tossing about in bed and getting out of bed. Had some slight cough, and the sputum was streaked with blood on the day of admission. He complained several times to his wife that his left side seemed paralyzed, and that his right eye smarted a good deal. When he wanted to move the left hand he always lifted it with the right.

Present Condition.—Patient delirious. Resp. 24, temperature 100.4°, pulse 108. Face flushed, pain in the head, some tenderness over the mastoid process in the right side. Discharge from right ear. Right pupil larger than the left. Both pupils reacted to light. No tender points along the spine. Patellar reflexes not exaggerated. Ankle clonus present in both legs, but more marked in the left. Sensation seemed to be normal. No muscular twitching, but restless, getting up all the time. No paralysis of power or motion observed after admission. Urine alkaline, specific gravity, 1025, albumen and sugar not present. Impaired resonance in the base of the left lung. No rales. Breathing heard over both lungs. Heart normal, liver enlarged, spleen palpable. The patient was delirious throughout the next day, January 10th, and died that night, twenty-four hours after admission.

Autopsy.—Made by Dr. Hamilton twelve hours after death. The condition of brain and meninges was the chief point of interest. The external surface of the dura mater was practically normal. No congestion of the vessels, but there were

some adhesions old in character at the base. No pus on the outside. The arachnoid and pia mater at the base, but more particularly on the right side, were congested and infiltrated with thick yellowish pus. The same condition extended over the cortex of both hemispheres, but was more marked in the frontal and parietal regions. The choroid plexus on the right side somewhat congested. Fluid in both ventricles not increased in amount. In the mastoid process pus was also found. The other organs of the body were normal, except the liver, which was enlarged—3 lb. 15 oz., somewhat fatty, and a number of infarcts throughout.

Bacteriological examinations of the blood before death and of the pus after death gave pure cultures of streptococcus pyogenes.

THE OUTBREAK OF SMALL-POX IN CAMDEN TOWNSHIP, KENT COUNTY.

REPORTED BY W. F. BRYANS, M.B., TORONTO.

During October and November, 1898, there were four cases of small-pox in Camden Township, Kent County. The first case occurred October 3rd. The disease had been contracted in Detroit from a family supposed to have chicken-pox.

The Camden cases occurred in a family of ten persons, living in a seven-roomed farm-house. Of these ten persons five had never been vaccinated. Of these five, four contracted the disease. A baby eight months old did not take the disease, though unprotected by vaccination. The five who had been vaccinated five years ago, showed one good cicatrix each, and these all escaped.

The four cases occurred on October 3rd, 19th, 22nd and 24th respectively. The stage of incubation was in first case, seven to fourteen days; second case, sixteen days; third case, nineteen days; fourth case, twenty-one days. The first case was semi-confluent and very severe. The temperature was characteristic in each of the first three cases. The fourth case was very mild, there not being over twenty papules present, and in only one was the characteristic umbilication present.

The highest temperature noted in any case was $105\frac{1}{2}$. This was before the rash appeared. After the rash appeared the temperature was in each case $98\frac{1}{2}$. The nausea was very marked in each case, and continued forty-eight hours. All made a good recovery. In the first case the pitting was excessive, especially on face. The other three are very slightly marked. The ten persons were quarantined at their own home, a seven-roomed farm-house.

The sick were only separated from the well by a thin wall. There was no attempt to separate the sick and well from October 3rd to October 14th. The disease was recognized as small-pox on October 9th. The rash was confluent on the head and face in first case. Pox could be seen under nails of fingers and toes during convalescence. There were pox in mouth and pharynx. In second and third cases the rash appeared first on lower third of legs, and was more marked in this situation than elsewhere.

Treatment.—No special treatment was adopted. Liq. ammon. acet. was given freely at first, and six ounces of whiskey were used for the four cases. During pustular stage a mixture of equal parts of carbo ligni, ac. boric and acetanilid was freely dusted on over the entire body. This seemed to be useful as a deodoriser, and also relieved the soreness of the raw surfaces. The ventilation was such by means of doors and windows that the patients were practically treated in the open air. The diagnosis was very easy in the first three cases, there being present the characteristic temperature, the intense nausea, and the umbilication of the vesicles. The fourth case was so slight as to be almost unnoticed had it not occurred during an outbreak.

Selected Articles.

TUBERCULOSIS.

BY THOMAS CLIFFORD ALLEBUTT, M.D., LL.D., F.R.S.,
Regius Professor of Physic in the University of Cambridge.

[ABSTRACT.]

The editor of the *Practitioner* is good enough to desire from me some expression of opinion concerning this important subject, one which has received so interesting a treatment at his own hands and those of his contributors. That I have anything to add to these previous opinions and records I cannot suppose; but some reiteration of the views of the older members of the profession may be of weight in pressing the subject upon public attention.

It is still with pain that I recall the sadness with which, in my early days, we were wont to recognize the presence of consumption in young and promising men and women, too often bright and interesting, or at any rate capable and industrious members of society. Well I remember the fatal—for such it then seemed—the fatal note of the “consonating rôle”; how it impinged upon the unwilling ear like a knell. For they nearly all died in those days. There were legends, indeed, in every man’s practice, in every family circle, of lives plucked from the fire; but these rare successes gave us no confidence in individual cases. Statistics are no comfort to the individual; they have scarcely an application to his case. What comfort is it to the man, standing before you for a verdict, to tell him that 10 per cent. of his class will recover? As I have said, prognosis was very dismal in those days. For years the victim of phthisis might linger; for years his foe might sleep, indeed; but, sooner or later, the hand of death was laid, softly or harshly, upon him.

Then arose Henry Bennet, a keen and original thinker, and a good fighter. Smitten himself with phthisis, he determined to live; and Bennet was the practical maker of the “open-air cure.” Bennet threw away all traditional codling, and committed himself boldly to the open air. Day and night he lived virtually out of doors; but, not altogether freed from the bogey of “catching cold,” he sought, and indeed wisely sought, a climate in which such an experiment—for then it was little more—could be conveniently, pleasantly, and, as he thought,

safely carried out. As we all know, he settled down at Mentone; there he lived in his beautiful garden, his old tower being but a summer and picnic house, and by night he slept without windows. After a while when he ventured to spend some part of the year in London, he found that even in our climate he could bear the well-opened window without harm, and thus grew bolder in his measures. A few years later Archibald Smith, Hermann Weber, Unger, and others, discovered not only that consumptive persons could trust themselves to the open air, but that it was not necessary for this purpose to seek a warm and delicate air; that even in the Andes, and in the winter of the high Alps, results could be attained as good, and even better, than the records of the Riviera. In 1870 and the two following years, tracing certain German rumors to their sources, I visited Davos, and helped to convey to English physicians the message of Dr. Unger, who, as he was wont to say, "triumphed at Davos over the Riviera." Then came Dr. Brehmer and Dr. Dettweiler, declaring not this climate in particular, nor that, but the fresh air of mother earth to be the essential remedy; and that the consumptive need not be banished to this country or that, but may find his homely remedy at his own door. Koch's discovery of the tubercle bacillus gave point and clearness to these conceptions; the modern system of treatment gave the physicians new weapons and a new enthusiasm in fighting the enemy, and now we hear even the "consonating rôle" with some approach to equanimity. A pathetic acquiescence in the delusive hopes of the sanguine *poitrinaire* has given place to a cordial anticipation of cure. This line of progress, and the likes of it, such as the serum treatment of diphtheria, have cheered both physician and patient, and have largely transformed the face of medical practice.

Opinion, indeed, after its fashion, is now turning to the other extreme, and people are saying that any air will do; the raw, damp atmosphere of English moorlands in winter, the bitter winds of our east coast, or even the murk and filth of London. Well, it is true that if the invalid cannot change his country he will do better to trust himself to such air as he has than to huddle himself up in dread of it. However, the best of our home atmospheres may be trusted too carelessly, even if they may be used by the discreet with success. In this respect, those who have the means to choose can find far better opportunities of enjoying the open-air cure; perhaps best by camping for months at a time in the deserts of Upper Egypt and Nubia, or of Syria; or, again, in the Asiatic, South African, American or Australian prairies and uplands. Nevertheless, much and remarkable success may be obtained in England,

especially in its more favored regions; yet the best results are to be had at high elevations: at Davos or St. Moritz for the young and active, and the Andes and other balmier highlands for weaker or older patients; and next to the mountains come the great deserts, especially the Nubian, and after these the open-air treatment at lower elevations, a dry, equable and bracing air being the best. The German institutions, in my experience, are unsuitable for English patients of the upper classes, the habits of life and cookery being distasteful to them. A damp soil—and in England damp soils are too much with us—is injurious; cold and damp air favors catarrh, and catarrh favors tubercle. Persons of catarrhal bent should either leave England or reside on dry uplands, as on the uplands of Hampshire or Sussex. Cases in which there is a proclivity to pleurisy or sore throat (of whatever kind) are better away from Alpine climates.

Are we to hope that consumption, like small-pox, may become a tale of the past? If so, like small-pox, it must be banished by preventive means. Is there any prospect of such a consummation? Undoubtedly there is; and while we are perfecting our means of cure, let us not rest till these perfect means are no longer wanted. Tuberculosis has fallen into the class of infectious diseases, and must be resisted by the methods applicable to infectious diseases: these are—to seek for an antidote, and to abolish the immediate cause.

Happily, man is not a highly susceptible animal in respect of tubercle. Were man as the guinea-pig before tubercle, he would probably have been extinguished ere this, and the editor's essays would not have been written. Some ten or twelve years ago I detected tubercle bacilli in swarms in the milk of one of my own cows. As this cow was a valuable one, I had turned too deaf an ear to some story of a cough, and her milk was continually milked into the pails with the rest. This milk, thus tainted, was not only consumed for weeks by my own family, including a little girl and her young governess, and by household servants old and young, but by two out-door families, one including a young wife, the other a wife of some thirty-five years of age and seven children under twelve years old. For six months I anxiously awaited the consequences, but my little world happily said nothing to my tubercle; as it happens, none of this company has even yet fallen to tubercle. By not a few of these various folk, however, the milk was drunk freely as a food, probably for the most part unboiled.

Now, can this comparative immunity be raised into a complete immunity, say, by a protective serum or other animal juice? Of such a prospect I cannot speak positively; but I have cognizance of certain unpublished laboratory investigations

which are not without hope in this direction. Even if such an instrument be discovered, we may still prefer prevention to antidote, and banishment of the cause to prophylactic and curative vaccinations.

Whether we should register cases of tuberculosis, and whether we should isolate infected persons is, however, presently under discussion. In the large cities of the United States registration is making great way; the social and other hindrances to registration in England seem considerable; still, registration will probably come about. When we demand isolation we are, I think, fanatics; that is, we are driving hard one set of arguments with a blind eye to contingent and conflicting considerations derived from other circumstances which we ignore, or to which we are insensible. This is to be "logical," as our French neighbors call it. Would it have been for the public good to have isolated Henry Bennet or Andrew Clark in the midst of a beneficent career; or now, on early suspicions, to carry off young people to desert islands, to break up families, or to banish a bread-winner on the rather remote chance of consequences which we are learning successfully to neutralize? An old friend of mine came to me with well-marked pulmonary phthisis fully fifteen years ago; he was, and happily still is, a keen sportsman, and one who detested the notion of exile. He was a married man with four children (still healthy and now out in society), and he was subject to overt gout—to podagra—a good sign in the tuberculous, as in the overtly gouty the tendency to protective "fibrosis" is stronger. So I said, "Live still in the open air, but even more so; take certain proper precautions about your expectoration and the like, and continue your present life." This patient has still phthisis—advanced phthisis—in both upper lobes; but he hunts four or five days a week, and is still a forward rider, with one of the fastest packs in the shires. He is a good neighbor, a good father, a good friend and a happy man. And some of us would have shut him up fifteen years ago! Now such cases occur abundantly in every doctor's practice.

Our instant business, to withstand the multiplication of the bacillus as best we can, suffices for us; we may avoid it far better than we do at present, and we may awaken in the English public a quicker perception of the value of ideas in these, and, for that matter, in all subjects of thought than at present prevails, for your ordinary Englishman is as dull to ideas as he is valiant in action; and thirdly, we may provide for the victims of tubercle some instruction in the best cure at present known, namely, the open-air cure; and see that some tolerable means for carrying it out are within the reach of all classes of the commonwealth.

Finally, is the "open-air cure" a cure for consumption only? Are not the virtues of fresh air rather indirect and confederate than specific in their functions? Even from the airiest room we are warned that "ozone" is absent. In the treatment of many other chronic diseases the open air may be an invaluable ally; in the treatment of typhus fever I proved and published its value thirty years ago, and oftentimes since have seen its value in infective and septic affections of many kinds. Nay, Mr. Auberon Herbert has eloquently proclaimed the virtues of the open air, for the so-called healthy man, any time this ten years or more; and longer ago than that, at his house in the New Forest, had carried out his principles in as thorough-going a fashion as the most modern "air specialist" of them all.—*The Practitioner*, January, 1899.

A CEREBRAL TUMOR IN THE LEFT FRONTAL LOBE.

(Continued.)

Dr. Giannelli, in his most accurate study upon ninety-seven cases of tumors of the frontal lobes, has not found psychological symptoms in more than twenty (*Policlínico*, fourth year, 1897). The recent cases gathered by Devio and Courmont (*Revue de Médecine*, April 10th, 1897), by Tamburini and Obici, also show the importance of the grave psychological symptoms in the course of frontal tumors. The clinical deductions have found their support and their proof in the laboratory. Bianchi had already observed the loss of the higher psychological functions in apes with their frontal lobes mutilated (1894). Then examining histologically the brains of apes thus mutilated (1895), he was able to show that the frontal lobe, while it has few direct relations with the pons, communicates freely with the sensory and motory cortical areas.

From all of this we may make the deduction that in the formation of the higher psychological processes, the frontal lobes, or, better, the prefrontal, have a special importance. The study of cerebral localization, in which the names of our Tamburini, Luciani, Seppilli, Bianchi and others were so prominent, has taught us that the cerebral cortex has no uniform function, but that upon it there are special zones with special functions. While we assert that the prefrontal lobes are the part of the nervous system set apart for the formation of the higher psychological manifestations, we do not by that mean that the prefrontal lobes are organs independent in themselves of the other

parts of the brain—that would be contrary to the very principle of cerebral localization. If the various parts are designated each to a special function, all are, however, connected, so that the harmonious fusion of their products goes to form the various manifestations of life. Likewise, in order that the function of the prefrontal lobes may be manifested (physiology having shown that it is not the seat of the motory and sensory perceptions), it is necessary that the other parts furnish the material. From sensation, a physiological fact not of a psychological nature, by a dynamic vital action of the cerebral cellules which receive the sensation, we ascend to perception, the first psychological fact, whose remembrance or whose images or representations constitute the simple elementary idea. From the simple ideas which accumulate in the cortex, preserving special bonds, we proceed by degrees to the formation of the highest abstract thoughts. But for the formation of the abstract thoughts, those anatomical elements which have already been the seat of the first images, of the first associated groups, are not sufficient. It is certainly necessary that other elements of higher functional developments should intervene; and it is here that the importance of the prefrontal lobes shows itself. Here would take place the fusion of the sensorial and motory products of the other parts of the brain, the reproduction of the ideas in their more complex associated relations, the formation of abstract thoughts, of judgments and of reasonings, in a word, the synthetizing of all those facts whence is constituted the personality, the psychological life, of the individual. The prefrontal lobes, writes Bianchi, would receive the nervous waves from all the sensorial areas of the brain, and would transmit them, after the special elaboration of which they are capable, to the motor zones, and especially to the centres of spoken and written speech. They would thus be the more immediate organ of consciousness and memory, that is to say, of the personality in space and time.

Wherefore I claim that the psychological disturbances in my case are due solely to the change in the white substance, and to the compression and material alteration of the cellules of the affected frontal lobe. I claim that in the diagnosis of tumors of the frontal lobes, no small share must be given to psychological symptoms, which appear early, which last and increase in force, and are prominent throughout the course of the disease, especially when, as in my case, other marked symptoms do not exist, which would lead one to conclude that the neoplasm was in other parts of the brain. And, nevertheless, a symptom was present from the first, and lasted to the death of the patient—a symptom which seemed to have arisen in order to keep up the doubt as to the seat of the tumor—I mean the special

wavering gait. On this subject I shall mention that L. Bruns, in 1892, in his observations on four cases of tumors in the frontal lobes, with autopsy, stated that a leading and constant symptom was a disturbance of the equilibrium of the body analogous to cerebellar ataxia, which is rare in tumors of the other parts of the brain. Recently, at the International Congress at Moscow (1898), he has spoken again on the subject, and asserts that the so-called cerebellar ataxia, claimed to be characteristic of affections of the cerebellum, can be found in the same manner in tumors of the frontal lobe, and under the following form. He says that there are two forms of cerebellar ataxia: (1) typical ataxia, or the drunkard's gait of Duchenne; (2) resembling the ataxia of babies. He also traces the diagnosis between cerebellar tumor and frontal tumor with co-existing ataxia, taking account of the general or collateral symptoms, which are met in each case, differing in the one case from the other. My case might confirm what Bruns asserts; the patient walked like a drunkard, without, however, perceiving it. And the tottering gait did not depend on true vertigo. The sense of equilibrium was truly wanting. Disturbances of the gait in cases of frontal tumors have been observed also by others. Thus, to mention only a few, in Giannelli's case—a syphilitic tumor of the left frontal lobe, cured, the sense of equilibrium was slightly wanting. In the first of the two cases of Tambroni and Obici, walking was very difficult, both on account of the general weakness and because of the tendency to fall backwards. We therefore see how interesting would be an accurate and comparative study of disturbances of gait in frontal tumors, both in order that we might have a fuller knowledge of the features thereof, which perhaps are not confined between such narrow bounds, as Bruns says, and also that we might have another diagnostic symptom, and a more complete study upon the physiology and pathology of gait and equilibrium in cerebral diseases. I merely claim that, in my opinion, such disturbances of the gait are, in every case, to be accurately sought out, as they, when accompanied by grave and early psychical symptoms, may have no little importance in the diagnosis of the seat of tumors of the frontal lobes.

Translated from *La Clinica Medica Italiana* by

HARLEY SMITH.

Society Reports.

TORONTO CLINICAL SOCIETY.

The fifteenth regular meeting of the Toronto Clinical Society was held in St. George's hall, Elm Street, on the evening of the 11th January, 1899. Dr. F. LeM. Grasett, the President, occupied the chair.

Fellows present: H. J. Hamilton, Rudolf, Bruce, Peters, J. E. Graham, Chas. Temple, John Caven, Meyers, Small, McIlwraith, Badgerow, Ryerson, Wm. Oldright, Trow, W. H. B. Aikins, Lehman, Fotheringham, Thistle, Davison, Chambers, George Elliott, W. H. Pepler.

Nominations: Dr. Wm. Goldie, proposed by Dr. Jno. Caven, seconded by Dr. G. S. Ryerson.

Otitis Media with Purulent Meningitis.

Dr. H. J. Hamilton detailed the history and presented specimens. (See page 82.)

In discussing the case Dr. Ryerson asked whether there was any history of chronic ear trouble, and stated it would be interesting to know whether abscess of brain in this case followed an acute attack of some old chronic disease.

Excision of Elbow for Tubercular Disease.

Dr. George A. Peters presented a patient (about eighteen years) whose right elbow he had excised about four weeks previously for tubercular disease of elbow of long standing. Commenced after a fall. Had never suppurated, but got stiffer and stiffer every year. Never able to supinate his hand. Tuberculin test had been used and a marked reaction obtained. Excision performed. Kocher's operation. Patient had not seen the palm of hand for thirteen years. Dr. Peters gave a short description of the operation. The arm is now painless. Patient can now comb his hair and feed himself with it. Can bend the arm to a right angle. Pronation and supination good, but not perfect.

Jacksonian Epilepsy.

Dr. D. C. Meyers exhibited a patient (male of twenty-three or thereabouts) subject to Jacksonian epilepsy. At five years of age he had been struck on head by club falling out of a tree.

Dazed, but no loss of consciousness and no depression of skull. At birth, severe labor. Intense headaches about six months ago. Never vomited. Sometimes for a month entirely free from an attack, then a spasm. Attacks mostly confined to left arm. Always conscious. Patient gave voluntary exhibition of bringing on an attack and suspending it by seizing hand forcibly with right member. Spasms last thirty seconds. As many as thirty in a day. One day he had sixty. No change in pupils; no optic neuritis; no urine was passed.

This case was discussed by Drs. Graham, Oldright, Bruce, Peters and Davison. Drs. Bruce and Peters favored trephining the skull for the relief of the patient.

Cerebro-Spinal Meningitis, with Specimens.

By Drs. Graham and Caven. (See page 79.)

Drs. Fotheringham, Davison and Anderson discussed the case, the two latter instancing somewhat similar cases seen in practice.

Tumor of Spinal Cord.

Dr. J. E. Graham. (See page 80.)

Notes of a Case of Cerebral Tumor.

Dr. Fotheringham read interesting notes from his case book regarding a boy, aged 12, under his charge in the Hospital for Sick Children. Symptoms: Headache, dizziness and vomiting; vomiting lasted six months, occurring often four to six times a day. Some hiccough also. Sight began to fail in March, 1897; but at times he had perception to light and color for a short time. Present condition of patient decidedly fat. Pupils very widely dilated, with very slight reaction to light. Diagnosis: Tumor, possibly gliomatous, possibly fibrous, situated in angle of crus and pons. The notes were incomplete as to prognosis, as the patient had passed from under Dr. Fotheringham's charge.

Drs. Davison, Ryerson and Graham made brief contributions to the discussion, after which the society adjourned for the usual refreshments.

GEORGE ELLIOTT,

Rec. Secretary.

LONDON MEDICAL ASSOCIATION.

The regular monthly meeting of the Association was held in the Medical College on the evening of December 12th, those present being: Dr. Eccles, the President, in the chair, and Drs. Campbell, Balfour, Graham, Hodge, Macarthur, Teasdall, New, Ovens, Stevenson, Henderson, Woodburn and English.

Hepatic Calculus.

Dr. Stevenson exhibited a hepatic calculus discovered *post mortem* in a patient aged fifty years, who died of pneumonia. In addition to the calculus the gall-bladder contained a lot of thick grumous matter.

Albuminuria Complicating Pregnancy.

Dr. Balfour read a most interesting report of a case of albuminuria complicating pregnancy. (See page 77 of this issue.)

The discussion thereon was taken part in by Drs. Campbell, Graham, Hodge, Teasdall, Henderson, New, who referred to a case of paralysis of the right internal rectus, due to albuminuria, now under his care. Ovens, who, owing to the short standing of the trouble, believed the paralysis to be due to a peripheral lesion toxic in origin; Stevenson, who spoke of the impression produced on the fetus by the albuminuria, and stated that in the majority of these cases where the child is born alive it seldom survived beyond childhood; English, who referred to a patient who, having suffered from goitre for years, had albuminuria and eclampsia when seven months pregnant with her first child and lost it, but in the succeeding pregnancy was entirely free of albumen in the urine and was delivered of a child; and Eccles, who referred to a patient who had lost several children at about eight months owing to toxic poisoning from albuminuria, and in whom he got a living child by bringing on labor at eight months, did not believe pressure to be the cause of albuminuria, and instanced cases where ovarian cysts of forty-five and fifty pounds' weight occurred without albumen in the urine.

Dr. Balfour made reply. He believed that nourishment being deficient the blood was anemic, and that it was in the first instance the cause of this albuminuria, and also that the solids in the urine being normal in amount, systemic accumulation did not take place and consequently no eclampsia occurred.

The President, Dr. Eccles, in accordance with custom, gave an interesting review of the work done by the Association during the year.

The following were elected officers for the ensuing year: President, Dr. R. Ferguson; Vice-President, Dr. J. D. Balfour;

Secretary, Dr. W. M. English; Treasurer, Dr. J. A. Macarthur; Corresponding Secretary, Dr. H. A. Stevenson.

After votes of thanks being tendered to the officers of 1898 the meeting adjourned.

W. M. ENGLISH,
Secretary.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The Southern Surgical and Gynecological Association held its eleventh annual meeting at Memphis, Tenn., December 6th to 8th, 1898. A large number of distinguished surgeons and gynecologists were in attendance, and many admirable papers were read and discussed.

Dr. Richard Douglas, of Nashville, President, in his annual address, said:

"This association in the ten short years of its history has become renowned for the excellence of its scientific work, the truthfulness of its records and the spirit of warm friendship that pervades its membership. And we cannot too cordially express our thanks to Dr. W. E. B. Davis, our permanent secretary, to whose indefatigable efforts the Southern Surgical and Gynecological Association owes its existence and high standing."

The officers elected for the ensuing year were: Dr. Joseph Taber Johnson, of Washington, President; Dr. F. H. Parham, of New Orleans, and Dr. W. L. Robinson, of Danville, Va., Vice-Presidents; Dr. A. M. Cartledge, of Louisville, Treasurer; and W. E. B. Davis, of Birmingham, Ala., Secretary. Members of the council are Dr. L. S. McMurtry, of Louisville; Dr. George J. Englemann, of Boston; Dr. G. M. Johnson, of New Orleans, and Dr. Tiffany, of Baltimore. Dr. Ernest S. Lewis, of New Orleans, was made chairman of the committee of arrangements for the next annual meeting.

THE DUFFERIN UNION MEDICAL ASSOCIATION.

The Dufferin Union Medical Association was organized at Shelburne, Ont., December 30th, 1898. The members were addressed by Dr. James Henry, Council Representative for District No. 6, and the President-elect, Dr. John Barr.

Dr. George Campbell, of Grand Valley, was elected Vice-President, and Dr. Charles M. Smith, Orangeville, Secretary-Treasurer.

The Secretary read a paper, which was directed to be published. (See p. 74 this issue.)

The society will hold its meetings quarterly, the next session to be held in Orangeville on the second Tuesday in May, 1899, when a number of papers and cases will be discussed.

Editorials.

MEDICAL EDUCATION.

Dr. Wm. Ewart, Senior Physician to St. George's Hospital, London, in his Harveian lectures, to which reference was made in our last issue, had much to say about the teaching of medicine. He said the system of teaching which prevails at present is "academical" to a fault, the various subjects being dealt with in compartments. Very frequently it happens that the teaching of elementary subjects is practically divorced from their uses, and students forget much that they have learned in anatomy, physiology and chemistry before they commence clinical work.

Dr. Ewart regards examinations as a necessary evil, the tendency of which is to cultivate and develop memory rather than imagination and original thought. Many think that the burden of scientific facts is becoming intolerable for medical students, and should be to some extent lessened. The most important point, however, according to the lecturer, is the matter of clinical teaching. He thinks that elementary clinical work is too long delayed. The student, in the early part of his course, devotes his attention entirely to pure science, and at a certain time suddenly goes over to his final work in hospitals and lecture rooms. He may at once become a clinical clerk before he is at all fitted for his duties in such capacity.

We believe that it would be desirable to have the clinical element introduced into the teaching of medicine as early as possible, but before a student has completed his primary course he decidedly objects to these clinical features. He ever has before his eyes that "necessary evil," the primary examination; he has to do a vast amount of work to prepare himself for that serious ordeal, and he positively wants no "extra frills" in the shape of clinical "tips."

As far as Canada is concerned, the importance of the clinical aspects in teaching has been duly appreciated for many years; but we have come to the conclusion that the most feasible plan

is to give the students as much "pure science" as possible during the primary course, and make practical and clinical work the all-important element in the final course. The system adopted in Toronto of dividing the men of the third year into small classes under capable instructors, and teaching such classes what may be considered elementary clinical methods, has produced good results. We would consider it rather absurd to make a man who has just passed his primary examination, a clinical clerk without any preliminary training of any sort. The tendency has been to exalt the practical and bedside methods of teaching, and to largely diminish the didactic lecturing. The healthy rivalry between the schools in Toronto has done no harm, while the friendly feeling which to so large an extent prevails between them, has done positive good. Toronto and Trinity are commencing to realize that their best policy is to pull together in the great struggle for existence and pre-eminence which is taking place among the medical colleges of the world.

EXTRAORDINARY BLACKMAILING.

A most infamous system of blackmailing has recently been exposed in England. In the first place the blackmailers carried on a most disreputable business of selling abortifacient nostrums for a period of about two years. They then sent letters to those women who had used the drugs, threatening to prosecute them unless they paid a certain sum of money. A great many yielded to their exorbitant demands. The Judge in referring to the position of these unfortunate victims read a couple of letters. One writer, after expressing "the greatest sorrow for doing wrong," concluded: "But if I have done wrong I ask you to forgive me, as I did not know it was wrong, and I will promise you I won't do wrong any more, for Christ's sake. Amen." Another letter was from a poor servant girl, who sent the two guineas demanded, and begged for forgiveness. The Judge added that there were thousands of such letters.

After all evidence was given the Judge analyzed it, explained the law affecting blackmailing, and then gave the case to the jury. After deliberating three-quarters of an hour they

brought in a verdict against the three blackmailers. They also added a rider expressing their conviction that the vile plot could never have been possible but for the acceptance of the prisoners' immoral advertisements by a section of the press, religious and secular. The jury were also of opinion that means should be found to suppress such advertisements, and the institutions from which they emanated—a recommendation which the Judge said he would send to the Home Secretary. Two of the prisoners were sentenced to twelve years each of penal servitude, while the third was sentenced to seven years.

The London *Lancet* has recently investigated the nature of two of these nostrums used for the purpose of procuring abortions. It says that in one savine appeared to be the active constituent of the pills, while in the other the liquid was a mixture of senna and rue tea. The letters from the *Lancet* to purchase the nostrums were so written as to leave no possible doubt in the vendor's mind that the purpose for which the purchase was being made was the induction of abortion. The *Lancet* says: "If any one should find in our conduct here matter for unfavorable comment on the ground that we have tempted Mr. Thomas Ottey to sin, we have to say that we found in him so willing an accomplice that we can hardly have been his seducers, and, secondly, that it is useless to fight a certain sort of stink with rose water."

POST-GRADUATE WORK IN LONDON.

Arrangements have recently been made in London which give Canadians and Americans improved facilities for post-graduate work. Dr. William Murrell gives some details concerning the new regulations which relate to such work, in the *Medical Brief*, January, 1899. Any Canadian or American physician can attend the practice of nine hospitals in London for three months on payment of a fee of seven guineas (\$37). He can attend the same for six months for a fee of ten guineas (\$52). Cards of admission can be obtained from the Secretary, Metropolitan Medical Schools office, West Wing, Examination Hall, Victoria Embankment, London, W.C. These tickets allow the holders full admission for all varie-

ties of practice in the following hospitals: Westminster, Guy's, St. Thomas's, Charing Cross, Middlesex, St. George's, St. Mary's, King's College and University College.

The number of visitors who have taken out such tickets during the last few months is large, and the regulations have given general satisfaction. There has been no overcrowding in the wards, and no friction with the regular students. In all the hospitals there are many departments open at the same time; for example, the medical wards, the surgical wards, the wards for special diseases of the eye, ear, nose, skin, etc., the operating theatre, and the post-mortem room. Dr. Murrell says that most of the visitors, after getting their tickets, make a tour of all the hospitals on the list, and then attend the practice of some one institution. Many who intended to remain for only three months have changed their minds and extended the time to six months or more. The Westminster Hospital, in which Dr. Murrell is one of the lecturers on medicine, issues a special ticket for twelve guineas (about \$62) to British, Colonial and foreign qualified practitioners, which will allow the holder to attend the hospital practice and all lectures for an unlimited time, "with a view to receiving a certificate of attendance for examination purposes."

THE PROGRESS OF A GREAT CHARITY.

Dr. Ryerson, General Secretary of the St. John Ambulance Association in Canada, has recently received the returns from the various Centres, which show that the Association's work is growing. The following figures show the number of persons who have completed the course of instruction since the establishment of the Association in Canada, but does not include those who have attended some but not all of the lectures. Some three hundred more should be allowed for them: Halifax, N.S., 258; Fredericton, N.B., 52; Montreal, 95; Westmount, Que., 106; Toronto, 727; Brantford, 30; Guelph, 26; Orillia, 50; London, Ont., 68; Vancouver, B.C., 68; grand total, 1,480.

The Association is established to give instruction in rendering first aid in case of accidents and sudden illness, in the elementary principles of ventilation and sanitation, also of nursing and in

carrying out works for the relief of suffering of the sick and wounded in peace and war, independently of class, nationality or creed. The lectures are delivered only by registered medical practitioners, and the Association is designed to be an aid to and support, and not an opponent, of medical men. Opposition to the work of the Association arises either from ignorance of its objects and modes of working or from the littleness of narrow understandings. H. R. H. the Prince of Wales is the president of the parent association, and Sir George Kirkpatrick of the Canadian Department.

MILITARY MEDICAL REFORM.

The gratifying news has been received, just as we are going to press, that stretcher sections and stretcher bearers are at last authorized by the Government. Military medical reform has been warmly advocated in these columns for many years, and we are glad that, with the aid of an enlightened and progressive General in command, the Canadian militia at last sees better times ahead in a medical sense. We will refer to this subject at greater length in a subsequent issue.

Progress of Medical Science.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Reactions in Cases of Wounds and Ulcers Treated by Oxygen Gas.

George Stoker (London *Lancet*, December 10th, 1898) gives the history of some cases of ulcers treated with oxygen gas, showing their toxic reaction, and giving their temperature charts. In nearly all cases treated by oxygen gas a distinct toxic reaction occurs at a period varying from a few days to a few months, and from the time of such occurrence the wound or ulcer heals much more rapidly. The discharges contained staphylococcus pyogenes albus aureus, or citreus. The points of special interest in these cases were, (1) that healing was not delayed, but was accelerated during and after the time the temperature was highest. (2) That the wounds did not become inflamed or dry, and the discharge continued healthy. (3) That there was a good deal of inflammation of the lymphatics and some swelling of the glands in the neighborhood of the ulcers. (4) That in some cases small secondary areas of infection existed where small abscesses formed, burst and healed rapidly. (5) That in all the cases observed the general malaise, or disturbance, was small in comparison with the height of the temperature. The tongue remained clean, there was little headache, and no sickness. Taking these facts into consideration, the author concludes that oxygen acts by forming an antitoxin from the secretion of the micro-organisms in the wound or ulcer. It is possible that the antitoxins which are made by injecting horses, etc., with toxins, are formed by a similar process of oxidation, which takes place in the blood of the animal. This would suggest the necessity of preparing an antitoxin for each separate case from its own micro-organisms, especially in more malignant forms, it being presumed that an antitoxin must have a toxin present on which to act or react. Antitoxins have been prepared by passing a stream of oxygen over a broth culture of the micro-organisms from each case; the broth is then dropped on the wound, where it is absorbed. The results from this method have been satisfactory, not only in cases of a non-malignant character, but also in cases of lupus and rodent ulcer. It is hoped and

believed that by working in this way and preparing antitoxin as above described, the satisfactory treatment of malignant disease may be ultimately reached.

Cerebral Tumors Successfully Removed by Operation.

Geo. E. Williamson (*Brit. Med. Jour.*, November 26th, 1898) reports two cases of cerebral tumors successfully removed.

CASE I.—Male, aged 34. Morning headache of two years' duration; vertigo. History of a fall followed by unconsciousness lasting for three days; paralysis of left arm and paresis of left leg; disappearance and reappearance with subsequent persistence of the paralysis; sensation of pins and needles in left hand and of hot water running down left arm. Double optic neuritis is well marked, but the sight notwithstanding is good. The knee-jerk is exaggerated, and there is well-marked ankle clonus in the left leg.

April 20th, 1897, he complained of feeling drowsy and of severe pain in the head. Shortly afterwards he vomited. At noon he had a fit. The left arm and leg and left side of the face were convulsed. He did not lose consciousness during the fit, which lasted about three minutes. There was well marked analgesia and anesthesia of the left hand and forearm.

Operation May 14th, 1897. A large flap, convex upwards, and consisting of the whole thickness of the scalp, was turned down at the right side of the head. The skull was trephined over the Rolandic area, and the hole enlarged with cutting forceps. When the dura mater was divided a tumor was at once seen on the surface of the brain. It was cut out with the handle of a scalpel, and was half the size of a tangerine orange. The cavity in the brain was lightly filled with gauze, and the scalp sutured without replacing any bone. The gauze was removed on the second day. Microscopic examination showed the tumor to be a small round-celled sarcoma. Shortly after recovering from the anesthetic he could move his left arm and leg almost as well as ever, but it was six days before the paralysis disappeared from the face. Patient made an uninterrupted recovery. February, 1898, patient followed his usual occupation. November, 1898, patient has remained pretty well since February. The swelling over site of trephine opening has increased and is harder than at first. Although patient's general condition is good, there is apparently local recurrence.

CASE II.—Female, aged 23. History—vomiting, headache and a fit followed by paralysis of right arm and paresis of right leg. In March, 1894, the patient began to suffer from frontal headache and vomiting. Sickness was pronounced in the morning, but gradually disappeared during the day, although the head-

ache persisted. On May 12th she felt her right arm and hand numb, and on the following morning but one, when attempting to get out of bed, she found she had lost all power of movement in her right arm, and that the fingers were firmly flexed into the palm of the hand. A fortnight later she had a fit. The convulsion was slight; she was unconscious for about an hour. On recovering consciousness she found that her right leg was now also paralyzed and numb. Condition on admission—partial paralysis of right upper arm, and loss of power in right forearm and fingers is complete. No impairment of sensation. Slight analgesia of right leg. In walking she drags the right foot as it is lifted heavily from the floor, when it is observed to be extremely tremulous. There is slight paralysis of the lower half of the right side of the face, and the tongue deviates to the right. Double optic neuritis in the first stage; pupils equal.

Operation November 14th, 1894. Details as in Case I. The growth was removed and with it a margin of healthy-looking cerebrum. The tumor proved to be a simple angioma. There was loss of speech (aphemia) after the operation. November, 1898: she has almost complete use of words. Slight fattening of right side of face. Complete power in muscles of upper arm, but fingers are spasmodically flexed in hand and do not relax readily. She can walk well, but gait is that of an old hemiplegic. There has been no return of the cerebral growth.

Surgical Treatment of Cancer of the Stomach.

Guinard (*Thèse de Paris*, 1898) collected 302 cases of resection of the stomach. He holds that every new growth of the stomach should be treated by resection as long as that operation is possible and justifiable on the grounds that the general condition of the patient is satisfactory. The mortality of the operation, once very high, is steadily decreasing. Kahn, in 1883, gives a percentage mortality of 85. The author makes out a mortality of 35 per cent. in 291 cases of pylorogastric resections within the last eight years. The certainty of recurrence is not so constant as might be supposed. Löbker reported two cases free from recurrence, five and seven years after operation respectively. Guinard states that forty-five out of 131 patients who recovered from resection of the stomach, were at least alive at the end of a twelvemonth. Surgeons should interfere early and cut well beyond the diseased area. He admits that diagnosis is extremely difficult in the earlier stages of cancer of the stomach. Even when the abdomen is opened by the knife, and the tumor is to be felt and seen, it is not always easy to be certain that it is a cancer. Histological evidence alone can decide, and this is not easy to obtain. He holds that under two conditions explora-

tory operations are justifiable: (1) Distinct modification of gastric chemistry, especially apepsia and the presence of lactic acid after a test meal. (2) Complete failure after careful dietary and medical treatment to keep the weight of the patient's body up to its normal weight, or to restore lost weight. Recent experience has shown that exploratory incision for that condition is void of danger, whilst it too often shows that even resection is impracticable. It is only a fifth of all cases where symptoms give good reason to believe that cancer of the stomach exists in an early stage that are amenable to surgical treatment.

The X-Rays in Diagnosis of Renal Calculus.

Ringel (*Centralbl. f. Chir.*, 1898), by experiments in the laboratory and observation on the living subject, has concluded the uncertain results attending the use of the X-rays, in cases of supposed renal calculus, are due to the fact that the transmission of the rays is influenced by the chemical composition of the calculus. Whilst an oxalate of lime calculus forms a well-defined picture, a urate calculus presents but an indistinct outline; and a phosphatic calculus, which, like a gall-stone, transmits the rays, is almost, if not quite invisible. The absence of a shadow, therefore, is no proof that a renal calculus is absent; and this rule will apply even to cases of oxalate calculi, or the outlines of such deposits may be obscured by pus or turbid urine. The X-rays are still more unsatisfactory in cases of vesical calculi, as the author has succeeded only twice in making out by skiagraphy the presence of a stone in the bladder, whilst in several cases of a very large stone removal by operation on the living subject or after death, no traces were afforded by this method of investigation.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS.

The Treatment of Uremia of Nephritis by Tapping and Venesection.

Ewald, of Berlin, at the recent meeting of the British Medical Association, strongly advocated this method of treatment. He called attention to the fact that the mode of action of many of the diuretics now in use is not thoroughly understood, and may be due to irritation of the secretory elements of the kidney, and that the cure of nephritic dropsy by diuretics and hydragogue cathartics was usually tedious. The writer advocated early puncture for ascites and pleuritic

effusions. Anasarca should be treated by needles introduced into the subcutaneous tissue, parallel to the skin. If one or two needles are introduced into each leg it is possible to draw off three to five litres of serum in a day. The strictest antiseptic precautions should be carried out in all the manipulations. The wound around the cannula should be dressed with salicylic cotton and iodoform collodion. A rubber tube should be attached to the protruding end of the cannula for conducting the fluid to a vessel on the floor beside the bed. The rubber tube can be fixed to the mattress by means of a safety pin, and thus prevented from pulling on the cannula. Ewald considers Southey's tubes too small, and advocates the use of needles such as are used in tapping the pleura.

The writer also calls attention to the value of venesection, followed in some cases by the intravenous injection of normal saline solution. He does not consider it necessary in every case, but when ordinary remedies do not give relief, and the strength of the patient will permit, blood-letting should be adopted.

The Treatment of Movable Kidney.

In a recent issue of the *Medical Record*, Einhorn discusses the medical and surgical treatment of this disease. We abstract the following conclusions, which indicate his views on the subject:

1. Nephroptosis frequently does not give rise to subjective symptoms, and is usually associated with ptosis of other abdominal organs.

2. The digestive symptoms, present in many cases, frequently do not depend upon the movable kidney, hence nephrorrhaphy will not relieve them.

3. The results of nephrorrhaphy are unsatisfactory in one-third of the cases, and are no better than medical treatment.

4. The mortality of nephrorrhaphy is about 2 per cent.

5. Rational medical treatment, such as rest in bed, massage, electricity, the application of a good fitting abdominal bandage etc., should be tried before surgical measures are considered.

Death from Hypodermic Injection of Bichloride of Mercury.

At the recent annual meeting of the Italian Society of Dermatology and Syphilography, Professor De Amicis reported a curious accident that happened after the hypodermic administration of mercuric chloride. The injection was made in the left side on a level of the angle of the scapula, when the patient was seized with severe pain, vertigo and a feeling of impending death. This was followed on the next day by paraplegia and partial loss of sensation in the left leg. Then followed paralysis

of the sphincters of rectum and bladder, bed-sores, and finally death. No *post-mortem* examination was made, but Professor De Amicis considered it a case of transverse myelitis, following an ascending neuritis—the result of an injury to an intercostal nerve.

The Treatment of Coryza.

In the *Revue de Thérapeutique Médico-Chirurgicale*, Galois is credited with giving the following treatment in coryza. As abortive treatment frequent inhalation of the vapor of tincture of iodine, cologne water or chloroform, or the following prescription:

R	Pure carbolic acid.	
	Ammoniac, of each	1 drachm.
	Alcohol (90 per cent.)	2½ drachms.
	Distilled water	½ ounce.

Every half hour place a few drops on a handkerchief and inhale.

Or, on the first day, every two or three hours the following powder may be snuffed up the nose:

R	Hydrochlorate of cocaine	2 grains.
	Boric acid	3 drachms.
	Salol	3 drachms.
	Menthol	2 grains.

Or,

R	Salol	1 drachm.
	Boric acid	6 drachms.
	Tannin	15 grains.
	Salicylic acid	15 grains.

To allay irritation of nasal orifices the following salve may be used:

R	Subnitrate of bismuth	1 drachm.
	Vaselin and lanolin, each	1 drachm.

As a palliative treatment the congestion may be relieved by atomization into the nostrils of the following solution:

R	Hydrochlorate of cocaine	15 grains.
	Distilled water	3 ounces.

—*Therapeutic Gazette.*

The Treatment of Diabetic Coma.

Robin (*Bull. de Therap.*) discusses this subject, and gives the following treatment which is based upon the probable assumption that the coma is due to toxemia and diminished alkalinity

of the blood. He advises the early administration of the following solution intravenously :

R. Sodii chloridi	1 drachm.
Sodii bicarbonitis	2½ drachms.
Aquæ destillatæ.....	2 ounces.

In addition saline hydragogue cathartics, such as sulphate of sodium, should be given to produce watery evacuations of the bowels. The exhibition of large doses of bicarbonate of sodium by the mouth will also materially assist in increasing the alkalinity of the blood. Robin believes that a strict milk diet is the best in these cases. When the heart becomes weak and irregular he recommends full doses of digitalis and ergotin.

The Administration of Antitoxin by the Rectum.

Dr. O'Connor, of Sowestoft, administers diphtheritic antitoxin by the rectum, and believes that absorption is both rapid and complete. He claims markedly good results, while at the same time there were very few complications.

The Importance of Cleanliness in the Treatment of Gonorrhea.

Professor Tarsar, of Berlin, believes that epididymitis, which frequently occurs as a complication of gonorrhea, is always due to secondary infection—the result of want of cleanliness on the part of the patient. He states that the injections have usually very little antiseptic power, and, as a rule, the patients never disinfect their hands and syringe before using an injection. Professor Tarsar has never known a case of epididymitis to occur in gonorrhea not treated by injections.

ORTHOPEDICS.

IN CHARGE OF CLARENCE L. STARR.

Treatment of Club-foot.

R. W. Murray, F.R.C.S., of Liverpool, presented a very practical and concise paper, with photographs of results, on the treatment of club-foot, before the section of Diseases of Children, British Medical Association. He first considers the treatment of the deformity in infants and subsequently in older children.

In infants, if the deformity is not severe, manipulation alone may suffice to correct it, or manipulation with retention bandage after division of the tendo Achillis. In more severe cases he operates by dividing subcutaneously the plantar fascia and all

resisting tissues on the inner border of the foot, just in front of the internal malleolus, down to and including the astragalo-scaphoid ligament. The varus deformity can then be over-corrected and the tendo Achillis divided. A plaster-of-Paris bandage is applied over the dressing and is renewed once in three weeks for about two months, when all splints or plasters are discarded, relying on daily manipulation to prevent recurrence. The author reports 117 cases thus operated on and claims very satisfactory results.

In older children, where, besides the ligaments and plantar fascia, the bones play an important part in keeping up the deformity, he considers a more extensive operation necessary. After giving his objections to the operations most commonly practised, such as wrenching, Phelps's operation, and removal of the astragalus, he says that the operation of removal of a wedge of bone from the convexity of the foot, as first performed by Mr. Davies-Colley in 1875, appeals to him most strongly. He emphasizes the necessity of thoroughly cleansing the foot before operation, as it is especially hard to render the parts aseptic, the skin being thick and callous and the dirt ground in. Another point he emphasizes is the removal of a wedge sufficiently large to allow the varus deformity to be easily corrected or in fact over-corrected. The tendo Achillis is next divided, the tarsotomy wound completely closed and a back splint with foot-piece applied. The wound is dressed in a week and again in a fortnight, when a plaster-of-Paris splint is applied, and the child allowed to walk in it at the end of two months. Ordinary shoes are subsequently applied. The writer reports fifty-two cases operated on after this plan, which in his hands has proven the most satisfactory method of treatment.

Round Shoulders.

The subject of round shoulders in growing children is usually considered so trivial and commonplace that very little attention is given to it, and as a consequence parents are compelled to treat the existing deformity after their own fashion. Shoulder braces are usually applied, and they for the most part strengthen the already strong pectoral muscles and allow the trapezius and back muscles to atrophy from disuse.

Mr. Bernard Roth, of London ("Trans. Amer. Orthopedic Assn.," Vol. I.), writes very strongly on this subject, and says that shoulder straps and braces are not only useless, but absolutely injurious when prescribed for weak back. He maintains that the treatment should be purely postural and gymnastic, and that all cases may be cured with proper instruction along this line.

Dr. E. H. Bradford, of Boston, has published a very practical

paper on the subject, which shows his usual carefulness of observation, and should stimulate all who read it to give more attention to the subject, especially as along with the unsightly deformity of the spine there is a marked narrowing of the chest. He classes the deformity as one of kyphosis frequently seen in growing boys and girls, and in weak adults. The shoulders are drooped and the scapulæ displaced forward, leaving the vertebral borders projecting like wings. The neck is thrown forward and there is a prominence of the abdomen owing to an increased hollowing of the small of the back. On attempting to raise the arms upward to a vertical line beside the head, one notices a limitation of motion, the vertical line being only reached by increasing the lumbar lordosis and the prominence of the abdomen. The limitation of motion is primarily caused by the clothing dragging the shoulders forward. For fear of injury to the pelvis, the clothing of growing children is, for the most part, swung from the shoulders. The skirt and often the undergarments and stockings are attached to the waist, which is supported by a narrow band passing over the shoulder about the middle of the clavicle and making pressure on the edge of the trapezius. The bulk of this not inconsiderable weight falls in front of the line of gravity, and the forward dragging on the shoulders and pressure on the sternum caused the child to seek the position of greatest comfort, which is the faulty position. This position maintained for a great part of each day naturally causes the soft tissues, muscles and ligaments to adapt themselves to the new position, and the limitation of motion naturally results. The prevention is a more important point to consider than the cure. This is easily accomplished when the cause is understood. The clothing should be so arranged that none of the weight of skirt or underwear should drag on the front of the waist, and the waist should exert no pressure on the sternum. The shoulder straps should be wide and rest on acromion process and not on the middle of the clavicle. In growing children the weight of clothing should be borne as far as possible from the hips, and not from the shoulders; the treatment as already intimated being postural and gymnastic, and extending over a sufficient length of time to strengthen the weak muscles and stretch the shortened ligaments.

Tenderness of Heel Due to Exostosis of the Os Calcis.

Dr. G. M. Lowe reports (*Brit. Med. Jour.*, October 15th, 1898) six cases of tenderness or pain on lower surface of the os calcis just at the attachment of the long plantar ligament. No pain is complained of when the foot is at rest, but when the foot is pressed, pain resembling the prick of a needle is felt. A small

nodular substance can sometimes be felt at the painful point. Skiagraphs were made of six cases and they showed a ring of bony growth surrounding back part of the os calcis, giving a hammer-head appearance to the bone. Four of the cases were women engaged in shop work, standing all day and habitually wearing thin-soled shoes. One was a young man engaged as clerk, whose occupation necessitated him standing long hours every day. The treatment consists of the application of a ring of felt around the tender point which relieves the pressure on the part.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON.

The Sixth International Congress of Otology will be held in London from August 8th to 12th, under the presidency of Dr. Urban Pritchard.

The Ninth International Congress of Ophthalmology will be held in Utrecht, Holland, August 14th to 18th, under the presidency of Dr. Argyle Robertson, of Edinburgh. The official languages at both Congresses will be English, French, German and Italian.

The Use of Holocain in Eye Practice.

Hinshelwood (*Brit. Med. Jour.*, September 3rd, 1898). The writer made a large number of observations with a 1 per cent. solution, with the following results:

1. There is complete anesthesia of the cornea produced in from fifteen to thirty seconds after instillation.
2. The anesthesia lasts about ten minutes.
3. There is immediately after instillation a slight feeling of burning, which rapidly passes away.
4. There is produced shortly after instillation a slight hyperemia of the bulbar and palpebral conjunctiva, which rapidly passes off.
5. There is no alteration in the size of the pupil.
6. There is no disturbance of the accommodation.
7. There is no alteration in the tension of the eye.
8. The corneal epithelium is not changed in the slightest, but retains its normal appearance.

In short, holocain has no other effect upon the eye than to produce anesthesia, in which it differs materially from cocain. Another advantage of holocain is the great rapidity of its action, producing anesthesia in from fifteen to thirty seconds. Therapeutically holocain is useful in photophobia and blepharospasm. It can also be used to advantage as a preliminary

application to nitrate of silver to allay pain. In operations the anesthetic effect of holocain and cocain are about equal, but the former is much more rapid in its action. Only three or four drops are necessary for the anesthetic action. In iridectomy it had the great advantage of not altering the size of the pupil. No toxic action has been observed in these cases of operation. Internally holocain is a poison producing convulsions analogous to strychnine. It should not be used hypodermically. According to Heinz a 1 to 5 solution is powerfully antiseptic, as proved by experiments on bacteria, and therefore it is not necessary to boil the solution in order to sterilize it, which is an advantage.

[My experience has been that holocain is somewhat insoluble and that it is difficult even to get a clear 1 per cent. solution. I have also remarked more irritation than the previous writer has, after application. It is also hard to keep and should be made fresh every day or two.—G. S. R.]

An Artificial Cornea.

Saltzer, of Munich (*Ueber den Kunst, Hornhaut*). According to S., transplantation of living cornea is a failure. He advocates the insertion of a chemically inset-body hoping that it may become incysted. S. seems to have accomplished this in several cases by using a button of rock crystal with a ring of platinum in which are hooks which are imbedded in the cornea. This rock crystal is in collar-button form. The hooks are fastened to the ring of platinum and then are forced into the cornea to hold the button in place. It is remarkable that these hooks do not cause ulceration or irritation of the cornea. Still more remarkable, persons who have simply a leucoma and have perception of light, have materially improved sight by wearing these buttons. He gives the following as the indications for the operation:

1. Inflammatory processes must have entirely ceased for a long time.
2. The cicatricial tissue must have undergone complete contraction.
3. The tension must be normal.
4. Light sense and projection must be good.

He describes in detail special instruments for this operation.

Influenza in its Relations to the Middle Ear.

J. Nathan (*Wurzburg inaugural thesis, Annals of Otology*, November, 1898). There are three recognized forms of influenza, the catarrhal, the nervous and gastro-enteric. Of these the two first only affect the ear. Influenza otitis affects the ear

either at its beginning, the early form; or after it has run its course, the late form. Most authors agree that the former is caused by the influenza bacillus itself, the late form being due to a secondary infection. The early forms, which represent the pure influenza process in the ear, are characterized by hemorrhagic inflammation. These hemorrhages do not occur in all cases, only in a proportionately small number, but hemorrhagic otitis media is met with more frequently in influenza than in other infectious diseases.

These early forms attack mostly persons in the middle and later periods of life; children enjoy a certain immunity. Before the influenza symptoms have subsided, the patient complains of pains in the deep parts of the ear. This is preceded in some cases by more or less epistaxis. The pains increase in intensity and radiate to side of the head and even to the side of neck and chest. A rise in temperature, accompanied or preceded by chills, takes place. There are generally annoying subjective noises and often abnormal sensitiveness to sounds. Hearing diminishes, even to complete deafness of the affected ear. The drum membrane is deeply congested, bulging from accumulated fluid with hemorrhagic points varying in size from a pin-head to that of a pea. The hemorrhagic blebs may appear in the external canal also, or there may be hemorrhagic myringitis without involvement of the middle ear. After a few hours, usually, a perforation takes place with the discharge of a sanious fluid—in some cases a hemorrhage lasting several hours. In other cases the discharge is purulent from the beginning; in these cases the mastoid is usually involved.

Koerner distinguishes four forms of pure influenza otitis:

1. Cases in which there are hemorrhagic exudates and hemorrhagic blebs on the drum membrane from the beginning.
2. Cases in which the drum membrane pouts and the granulations of the thickened mucous membrane crowd through the perforation.
3. Primary disease of the mastoid process, with secondary inflammation of the tympanum.
4. Ring-shaped hemorrhages of the drum membrane.

The Employment of Solutions of Toluidin-blue as a Collyria in Corneal Ulcers and Abrasions.

Clarence Veasey (*Philadelphia Med. Jour.*, August 13th, 1898). This compound is a member of the aniline group closely allied to methylene blue. V. has been using the Toluidin-blue in solutions varying in strength from 1-50 to 1-10,000. No pain or discomfort are caused by the stronger solutions. It has the additional effect of staining and showing up abrasions of the cornea which otherwise were unnoticed. This action is

allied to that of fluorescein. The reparative process is materially hastened by its use.

Boils in the External Auditory Canal.

Field (*Brit. Med. Jour.*, July 1st, 1898) thinks that for relief of pain nothing is better than glycerine. It acts by relieving tension, and when used should be mixed with an equal quantity of tincture of opium and some boric acid.

[The most rapid relief is afforded by incision, which should be free and down to the periosteum.—G. S. R.]

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN AND H. B. ANDERSON.

Tuberculosis of Aorta.

George Blumer, Bender Hygienic Laboratory, Albany, N.Y. (*Amer. Jour. of Medical Sciences*, January, 1899) reports two cases of this rare condition that have come under his own observation. He finds but few cases already recorded, and these fall under two heads: (1) Infection of aorta by extension of growth from surrounding structures; (2) direct implantation of the infective material from the blood. Blumer's cases belong to the latter category.

The records of cases of infection by extension have been made by Dittrich, Kamen and Sigg, the first two resulting from adhesion of tubercular lymph glands to aorta, the third from adhesion of caseating lung to aorta. The patients were all males, aged twelve, twenty-four and sixty-four years respectively.

Of the second class of cases Blumer finds reported two by Weigert, one by Flexner, one by Hanot and Lévy, and one—doubtful—by Stroebe. Blumer's own cases were seen, the first in the Pathological Laboratory of the Johns Hopkins University and Hospital, and the second in the practice of Dr. G. E. Gorham, of Albany, N.Y.

CASE 1.—Colored man, age, forty-five years; *post-mortem* examination revealed chronic tuberculosis of peritoneum; acute miliary tuberculosis of lungs, liver, spleen, kidneys, intestine, adrenals, pancreas, trachea, bronchia, epididymis, testicle, bladder, brain membranes, bone marrow and aorta, besides other lesions, non-tuberculous. The tubercular disease of the aorta appeared as three small nodules on the intima of the descending portion, all below the level of diaphragm, pin-head size or slightly larger, and showing tubercle bacilli upon proper treatment.

CASE 2.—Woman, white, aged fifty years; *post-mortem* examination revealed chronic tuberculosis of apex of right lung, miliary tuberculosis of both lungs and capsule of spleen, miliary tubercle of spleen and liver, caseous tubercles of kidneys, tubercular ulcers of stomach and ileum, tubercle of descending aorta. The tubercular disease of aorta appeared as one pin-head-sized nodule projecting from intima of descending portion. Giant cell formation was seen and tubercle bacilli were found in abundance by staining with carbolfuchsin, etc.

Although infection of the aortic wall through the vasa vasorum is possible, it would appear from examinations made that in recorded cases the intima has been attacked directly from its surface. Some previous damage to the intima, *e.g.*, atheroma, would undoubtedly conduce to the necessary lodgement of bacilli. That pre-existing lesions do favor such lodgement is shown by the fact of a cancer of the esophagus becoming tubercular as reported by Cordua, and cicatrices of both stomach and esophagus suffering in the same way in Breus' experience.

Protective Action of the Liver against Microbes.

Roger (*Sém. Méd.*, October 19th, 1898) describes his recent results on the subject (Paris Society of Biology). In 1897 he found that certain cultures of anthrax bacillus introduced into a branch of the portal vein did not kill rabbits, whereas cultures of the same virulence injected into other blood vessels did cause death. He then found that the lungs possessed a protective action against the streptococcus, whilst the liver possessed none. The staphylococcus aureus grows rapidly in the brain, but, like the anthrax bacillus, is destroyed by the liver. The liver seems to be powerless against bacillus coli, and even to favor the growth of this microbe. Both liver and kidney arrest the growth of oïdium albicans. Recently Roger has made further experiments on rabbits to determine what conditions modify the protective action of the liver. This protective action is less marked when the animal is kept without food, but remains observable even after three days of fasting. If $\frac{3}{4}$ c.cm. of a sterilized culture of bacillus prodigiosus is injected into an intestinal vein, the liver loses all its protective power against staphylococcus aureus. Large doses of glucose—given by the mouth—weaken the protective power of the liver, whereas small doses increase it. The effect of ether is most striking; 5 drops of ether injected into the portal vein, or 2 c.cm. given by the mouth, abolish the protective action of the liver, whereas small doses by the mouth—2 or 3 c.cm. of a solution of ether in alcohol and water—increase it. When the ether is injected subcutaneously

its effect is much less marked. Perhaps the beneficial action of potions containing ether, in the case of patients with infectious diseases, may be explained on the supposition that dilute doses of ether given in this way increase the protective action of the hepatic cells against certain microbes.—*Brit. Med. Journ.*

A Pathogenic Diplo-bacillus in Human Conjunctivitis.

Morax (*Ann. Pasteur Institute*, June, 1896) says: It is generally recognized that a number of different forms of bacteria may cause conjunctivitis. In many instances the general appearance and the development of a case will enable one to definitely determine the organism exciting the trouble. At times, however, this is impossible, and the bacteriologist has to be called in, since even the same germ may give rise to different manifestations anatomically regarded.

In health the lachrymal secretion contains but few organisms, examination often giving a negative result: the determination of their presence or absence in disease, therefore, is not difficult. In the acute stage the secretion contains only the micro-organism causing the inflammation.

Amongst the bacteria already described as exciters of conjunctivitis are the gonococcus and the bacillus of Weeks. We purpose to report now the finding of a diplo-bacillus as causative in some mild forms of the disease.

The clinical characters which justify the designation sub-acute, are marked enough to render diagnosis easy; its mildness, long duration, symmetry (being bilateral) and rapid subsidence under appropriate treatment sufficiently point it out. It falls under the old group of catarrhal conjunctivitis.

This form develops without any apparent cause.

Caseation of Supra-renal Capsules.

Sergeant and Bernard have studied a case in which the patient succumbed to what appeared an acute intoxication. At the autopsy the supra-renals were found caseated, although there had been no symptoms pointing to Addison's disease.—*Le Progrès Medical*, January 7th, 1899.

Typhoid and the Spanish War.

J. M. Da Costa (*Internat. Med. Magazine* of January 1st, 1899) makes a short but interesting report on some typhoid cases occurring among soldiers, who became infected whilst on service during the late war with Spain: The Pennsylvania Hospital received in all one hundred and thirty-five typhoid cases—soldiers. Of these, sixteen, or nearly twelve per cent., suffered from phlegmasia alba dolens whilst ill or convalescing from the

fever, the general percentage of this complication being from one to two. Of the sixteen cases, five had the left leg affected, eleven had both legs affected. In one case the attack came on the fiftieth day of the disease.

Da Costa formerly held with most others that phlebitis was always present; now he believes that thrombosis is the essential lesion, with or without phlebitis. The pressure of the clotted vein upon the artery may cause arterial thrombosis as well. This is rare, as also is a fatal result from phlegmasia.

Typhoid Bacillus in Cider.

Dr. E. Boden (*Ann. de l'Institut Pasteur*, Juillet 25th, 1898, page 464) says:

1. Typhoid bacilli introduced into cider are destroyed in from two to eighteen hours after introduction.

2. Destruction is due to acidity of cider: two grammes of malic acid per litre are necessary to insure it in the time specified. The less the acidity the longer the germ lives. In neutral cider it may survive twenty days.

3. Most commercial ciders have more than two per one thousand of malic acid, and accordingly the germ commonly lives no longer than eighteen hours. Dilution with contaminated water renders the cider capable of causing the disease for a varying length of time—varying with the reduction of acidity.

Bacterium Coli Com. as Cause of Urethritis.

Josiporice (*Centralbl. f. d. Krankh. d. Harn u. Sexualorgane*, B vij: H. 10; p. 663) reports two cases of urethritis resembling gonorrhea, from the discharges of which he isolated the bacillus coli communis, no gonococcus being found. He proved the identity of the bacillus by microscope and by cultures.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Bilateral Tumors of the Septum.

Pegler (*Jour. Lar., Rhin. and Otol.*, October, 1898) divides these growths into two varieties: the lymphoid and the erectile. Their chief interest lies in their etiological relationship to nasal obstruction, paresis of the soft palate, and sigmatic dyslalia or affections of speech.

Of the lymphoid variety the author reports one case. This consisted of a growth on each side of the septum, about three

millimetres from the posterior border. The tumors were attached by a broad, tough pedicle, and projected into the nasopharynx. They were oval in shape, pale in color, and mammillated on the surface. Microscopically they consisted solely of lymphoid tissue, encapsuled by ciliated epithelium. There were no adenoids, but large hypertrophies of the middle and inferior turbinates were present.

The erectile variety appeared as parallel longitudinal ridges, extending along the septum from before backwards at the level of the tubercle. They, too, are broad-based, pink in color, and sometimes lobulated. Microscopically they are composed of erectile tissue, mingled with masses of lymphoid cells.

The treatment of the lymphoid tumors was removal by cold snare and spoke shave, aided by the finger in the nasopharynx. The erectile growths were excised by means of a curved, probe-pointed tonsil knife, the snare being used to engage what had escaped abscission.

The Abuse of the Electric Cautery in the Nose.

Holbrook Curtis (*Laryngoscope*, January, 1899) sounds a judicious note of warning against the too free use of the galvano cautery in operative treatment of the nose, more particularly in the treatment of deformities of the nasal septum. The mucous membrane covering the triangular cartilage is very thin and tensely stretched, and when spurs and projectures occur, may be even more attenuated. Mal-nutrition in this area readily takes place, and when the galvano cautery is applied, the destructive change which occurs in the cartilaginous cells, is very likely to produce serious mal-nutrition. Virchow has recently shown that cartilaginous repair can only arise from proliferation of pre-existing cells. The effect of the galvano cautery is to change the nature of these cartilage cells and destroy their power of healthy proliferation. The consequence is, that clean-cut incisions, whether by saw, knife or trephine, are much more amenable to the healing process.

Curtis closes an able article, replete with just criticism, with a report of two cases of perforation of the cartilaginous septum, occurring in women, and in each instance caused by the over-officious use of the galvano cautery.

Hematoma, Abscess and Serous Cyst of the Nasal Septum.

M. G. Garel (*Arch. Internat. de Laryng, Otol., Rhinol.*, 1898) describes the three phases through which fluid collections in the septum usually pass. The origin as a rule, is traumatic, commencing as hematoma and ending in abscess. Sometimes, however, abscess is the first manifestation, following injury.

Abscess may also occur as a result of erysipelas, variola, typhus, etc. The author had met, likewise, with three cases of serous cyst of the septum. He usually treated the latter by cauterly puncture without the use of artificial drainage.

Acquired Tongue-tie.

Arthur Powell (*Brit. Med. Jour.*, December, 1898) records the history of an instance of this condition occurring in a Bengali lad, aged eight years. Nearly half the lower lip, from the right angle to opposite the right central incisor tooth was firmly united to the margin of the tongue for a corresponding distance. All the lower teeth on that side had fallen out, except the median lower incisor. Three years previously he had suffered from an ulcerative stomatitis of scorbutic origin. The teeth fell out at the time, and the ulcerated surfaces of the tongue and lip united along the line of contact. They had remained in that condition ever since. The union was firm, involving the whole thickness of the tongue.

On the Pathology of Diphtheritic Paralysis.

F. E. Batten (*Jour. Lar., Rhin. and Otol.*, October, 1899) bases his paper on the examination of six cases by the Marchi method.

The result of the examination was that he found "degeneration of a parenchymatous nature in various cranial nerves, in the anterior and posterior nerve roots, and in the nerve fibres as they pass through the white matter to the grey matter of the spinal cord, in the vagus, phrenic and peripheral nerves, and also on both sides of the posterior root ganglia."

In conclusion, the author regards the dominant lesion in diphtheritic paralysis as a parenchymatous degeneration of the myelin sheath, affecting both sensory and motor elements.

Tonsillar Calculi.

Aitchison Robertson (*Brit. Med. Jour.*, January, 1899) reports a case of enormous tonsillar calculus, occurring in a man aged 50, and weighing one ounce. About six years previously, he began to have repeated attacks of tonsillitis. These often ended in suppuration. About three years later the sub-maxillary glands on right side began to enlarge and become painful. They ultimately suppurated and discharged by a small sinus in front of the neck, at the level of the thyroid cartilage. After a while the discharge ceased, to be followed by diffuse cellulitis of the neck. This extended from the right ear down to the sternum. The sinus was slit up and pus freely evacuated. The wound then healed, and for two years the patient was well.

During the past summer he again suffered from slight cold, and could only take fluids in sips. While he was supposed to be recovering, he was awakened one night with a sense of suffocation. Violent coughing followed, and he forcibly ejected an elongated oval stone measuring by its longest diameters $1\frac{3}{4}$ by $1\frac{1}{2}$ inches, and weighing almost an ounce. Relief was at once experienced. There was no bleeding; and two days later when the throat was examined, a hollow behind the right tonsillar pillar indicated its former position. The calculus was pale-yellow in color, worm-eaten in appearance, and while fresh had a very unpleasant odor. Query? How could such an enormous stone have remained in position for years without having been discovered?

Case of Chronic Abscess of Naso-pharyngeal Vault.

Ardénne (*Rev. Hebd. de Lar.*, February, 1898) reports a case of this exceedingly rare affection. On examination a smooth, red, globular mass was found attached by a broad base to the vault. It was about the size of a walnut, and was filled with yellow non-fetid pus, which escaped on accidental rupture of the abscess during digital examination. After freely opening it, and swabbing out the cavity with zinc chloride, the parts healed.

A Case of Bulbar Paralysis.

Herr Baumgarten (*Monats. für Ohrenheilk.*, June, 1898) reports the history of a case occurring in a hotelkeeper, aged 40. He complained of difficulty in speaking and of choking when he ate or drank. His lips and palate were paretic, and the left half of the tongue was wasted. The epiglottis was erect and remained so, its depression being paralyzed. The right cord moved very sluggishly, and the internal tensors were paretic. Sensibility was reduced, but reflex action and electric excitability were still present.

In central paralysis the reflexes are long retained, but finally disappear; in peripheral and toxic paralysis they disappear soon but return quickly. Central paralyzes are generally bilateral, and the laryngeal conditions may suffice for diagnosis. The auditory nerve generally escapes.

Thyrotomy for Epithelioma of the Larynx Successfully Performed in a Man aged Eighty Years.

Middlemas Hunt (*Jour. Lar., Rhin. and Otol.*, October, 1898) reports an exceedingly interesting case of successful operation for the removal of intrinsic cancer. The chief interest lies in the great age of the patient. On examination the anterior

part of the glottis was found to be filled with a pinkish white growth, which had begun to break down and ulcerate. It sprang from the anterior part of the upper surface of the left vocal cord.

Owing to the great age of the patient the operation was divided into two stages: the first, tracheotomy; and five days later, the 2nd, thyrotomy, removing the growths and surrounding soft parts.

Although attended by the development of pneumonia during the second week after operation, the man made a good recovery. Nine months later he was still doing well, with steady improvement of the voice. Microscopic examination verified the case to be one of epithelioma.

Personals.

Dr. Allen Baines, of Toronto, spent a few days in New York early in January.

Professor Osler, of Baltimore, paid a flying visit to Toronto during Christmas week.

Dr. Charles O'Reilly, Superintendent of the Toronto General Hospital, spent Christmas in New York.

Dr. Thos. S. Cullen (Toronto, 1890), of Baltimore, spent a few days during December with his friends in Toronto.

Dr. Garnet Holmes (Toronto, 1898), of Chatham, is taking a course at Moorefield's Ophthalmic Hospital, London, England.

Dr. W. T. Stuart has been appointed Professor of Chemistry in Trinity Medical College in the place of Dr. Kirkland, deceased. He has been connected with that institution for many years as Professor of Practical and Analytical Chemistry.

Dr. George R. McDonagh, of Toronto, left the city January 22nd, and after spending a few days in New York took the steamer for Genoa. He expects to see something of Italy, Turkey, Egypt and Palestine, after which he will visit some of the hospitals in Europe.

Dr. James E. Graham, of Toronto, intended to have gone with Dr. McDonagh, but on account of the illness of his father, was unwilling to go so far from home. He is, however, taking a short holiday of three or four weeks. He left Toronto for Florida, January 26th.

Obituary.

WILLIAM YOKER, M.D.—Dr. Yoker, of Belleville, after a short illness from appendicitis, died January 11th, 1899.

JOSEPH JARDINE, M.D.—Dr. Joseph Jardine, of Sunderland, died January 17th, of typhoid fever, aged 34. He was a Trinity student in medicine, and received the degree of M.D. from Trinity University in 1890.

EDWARD ROBINSON WOODS, M.D.—Dr. E. R. Woods died at Galt, December 29th, 1898, aged 37. After finishing his undergraduate course in Trinity Medical College, he received the degree of M.D. from Trinity University in 1878. He afterwards did post-graduate work in England, and became L.R.C.P. Lond.

WILLIAM B. DUCK, M.D.—Dr. W. B. Duck died at his home in Preston, after a brief illness of one week, January 20th, 1899. He received his medical education in Trinity College, and received the degree of M.B. from the University of Toronto, and also from the University of Trinity College in 1879. He was successful as a practitioner in Preston, and took much interest in public matters. He was an active member of the Conservative party, and was a member of the Public School Board for several years, and chairman of the same during last year.

GEORGE SAMUEL HEROD, M.D.—Dr. Herod, of Guelph, died January 25th, of pneumonia, after an illness of about a week. He was born in Lancashire, England, in 1827, and came to Canada in 1840. As a medical student he received his education in the medical department of King's College, Toronto, and passed his final examination before the Upper Canada Medical Board in 1847. After taking charge of the Emigrant Hospital in Hamilton for a few months he commenced practice in Georgetown. In 1854 he went to Guelph and formed a partnership with Dr. Wm. Clark, M.P. He possessed great abilities and untiring energy, and was the leading physician of Guelph and vicinity for many years. He was a coroner and surgeon to the gaol for about forty-five years. He was the surgeon of the Wellington Battalion for a time, but resigned some years ago. He took an active interest in public matters, was a member of the Guelph Council for several years, Mayor for two years, and a member of the Public School Board for some time.

Book Reviews.

Clinical Observations on Two Thousand Obstetric Cases. By G. PORTER MATHEW, M.D. (Cantab.), etc., Later Scholar of Trinity Hall, Cambridge, and University Scholar, St. Mary's Hospital. Price two shillings. London: Simpkin, Marshall, Hamilton, Kent & Co., Limited; Whitehead, Morris & Co., Limited.

This unpretentious little book is, from a practical and clinical point of view, one of the most interesting contributions to obstetrical literature that I have seen. Dr. Mathew must have expended much patient labor on his analysis, although he does not claim that it is quite complete. His tables giving statistics are well arranged and very interesting. The best feature in the report is his description of different methods of practice under varied circumstances. I think I have seen nothing so good in so few words, although I don't happen to agree with the author in all respects.

After a few remarks on the diagnosis of the onset of labor he comments on the mechanism of labor. He correctly states, as was first clearly demonstrated (I think) by Berry Hart, that the usual statement, that in occipito-anterior cases the head is born by a movement of extension, ought to be qualified, as he has found "by examination per rectum that the chin does not leave the sternum until the major diameter of the head passes the vulval outlet." In occipito-posterior cases he rotates to the front, and claims he is always successful, the secret being that he rotates early. From the author's point of view many others (including myself) have been very unsuccessful in this respect.

In a large proportion of breech cases he performed external cephalic version before or early in labor. He strongly favors the use of axis-traction forceps in properly selected cases, and does not agree with Prof. Jabb Sinclair, the President of the Section in Obstetrics at the Montreal meeting, that such procedure in fairly skilled hands is frequently followed by bad results. He agrees with Milne-Murray that in flat pelvis version has no advantage over axis-traction forceps properly applied. His remarks on the causes and treatment of puerperal septicemia are exceedingly apt. He describes two forms: 1. Sapremia, or saprophytic toxemia; 2. Septic toxemia. The chief virtue of such classification is its simplicity, while it tends to prevent confusion about sapremia. His rules as to treatment are to my mind the best I have seen in print. The only complaint I have to make is that I think Dr. Mathew should have written a bigger book.

Diseases of Women. A Clinical Guide to Their Diagnosis and Treatment. By GEORGE ERNEST HERMAN, M.B.Lond., F.R.C.P., Obstetric Physician to, and Lecturer on Midwifery at the London Hospital, Examiner in Midwifery to the Universities of London and Oxford, Late President of the Obstetrical Societies of London, and of the Hunterian Society, etc. With 252 illustrations. Cassell & Co., London, Paris and Melbourne, 1898. Canadian Agents—A. P. Watts & Co., 10 College Street, Toronto.

In speaking of the general plan of this work, we feel that we cannot do better than produce the author's own words: "In most works on the diseases of women the subject-matter is arranged anatomically, according to the organ affected. But patients do not come labelled, 'Disease of Uterus,' 'Disease of Ovary,' etc. They come complaining of symptoms; and the discovery of which organ is in fault is often the greater part of the diagnostic problem. I have thought it more useful to the student and practitioner to arrange the maladies according to their leading symptom—that is, the one usually first mentioned by the patient. Such a division is not pathological or logical. It involves a little repetition; and in some instances it is difficult to say where the disease should rightly be placed, for the same disease will make one patient complain of one symptom, another of a different one, but I hope the clinical utility of this arrangement may compensate for these defects."

From Dr. Herman's experience and reputation as a clinical teacher, one would expect that in following such a programme he would produce a very valuable text-book. As a matter of fact, he has done so. The work is likely to be highly prized by both students and practitioners.

An American Text-Book of Genito-Urinary and Skin Diseases. Edited by L. BOLTON BANGS, M.D., Late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital; and WILLIAM A. HARDAWAY, M.D., Professor of Diseases of the Skin, Missouri Medical College. Octavo volume of over 1,200 pages, with 300 illustrations in the text, and 20 full-page colored plates. Price: Cloth, \$7 net; sheep or half morocco, \$8 net. Philadelphia: W. B. Saunders; Canadian agents, J. A. Carveth & Co., 413 Parliament Street, Toronto.

The volume is one of the American Text-Book series published by W. B. Saunders that has been of such practical value. The one under review in no way lessens the high standard of the ones previously issued. Mr. Saunders has always secured the best men in the several specialties to edit these volumes

and in Dr. Bangs and Dr. Hardaway the standard has been well maintained.

It is impossible to give an exhaustive review of a volume of the size of these, but the work as a whole is thoroughly practical, beginning with a chapter on urine analysis. We note an omission of any reference to bodies which strongly resemble casts, cylindroids, but are not casts. A description of these may prevent a false diagnosis of nephritis with all the accompanying worry. The description of connecting hypospadias and epispadias, two comparatively common conditions often neglected, is very lucid and well worth careful attention. We do not see why the clamp still figures in circumcision. It is an obsolete instrument, and by no means necessary. The operation can be more quickly and neatly done without any such encumbrance. The description of the use of cocaine in circumcision is, in our opinion, very faulty, although the common one. The injection as described is made "in the median line over the corona." This will produce an artificial edema through which the incision must be made and subsequent suture introduced. If the injection is made in the method described, but at the base of the penis, none of this edema is produced, and the incision etc., is made through normal tissue, which will unite by first intention. The strength of the solution is recommended as 4 per cent., while equally good results can be obtained by using 10 per cent., with no risk of cocaine poisoning. The diseases of the seminal vesicles, a subject generally neglected, or whenever referred to confounded with diseases of the prostate, is ably handled by Dr. Eugene Fuller, who has given much attention to the subject. To Dr. Fuller the profession owe a considerable debt for the able manner in which he has described the many phases that this diseased condition produces. Gonorrhea is by no means the only cause for seminal vesiculitis, and Dr. Fuller fully points out the order and causes. The operation of castration is much facilitated by making one incision at the apex of the scrotum after both testicles have been well drawn down; through the opening both testicles can be removed and the drainage is in the most favorable situation.

The second part of this work, which deals entirely with the diseases of the skin, is well illustrated and the text is very complete. We think that the colored illustrations are too highly colored, and in this matter again it is the common fault. What is wanted in the way of illustrations is to secure fewer illustrations, but have those few done with the thoroughness and accuracy in detail of the German work. The typography, paper and presswork are all that could be desired, and reflect the greatest credit on the publisher.

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A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D., LL.D., F.R.C.P., Emeritus Professor of Obstetric Medicine, King's College; Consulting Physician for the Diseases of Women and Children to King's College Hospital; Late President of the Obstetrical Society of London, etc. Seventh Edition from the Ninth English Edition. With seven plates and 207 illustrations. Lea Brothers & Co., Philadelphia and New York, 1898. A. P. Watts & Co., 10 College Street, Toronto.

There is probably no text-book on Midwifery that is so well and favorably known in Canada as that of Playfair. The first edition, published in 1876, pleased everybody who read it. It soon became the popular book on Obstetrics in England, Canada and the United States. Nine English editions in twenty-two years tells briefly how the work captured the John Bull doctor. We are not prepared to say that this edition is perfect, or relatively quite as good as that of twenty or twenty-two years ago when we compare the first, second and third editions with their respective contemporaries; but we do assert with confidence that it is a good book for both student and practitioner. Playfair's style of writing is charming—simple, plain, and attractive; his judgment is good; his ideas are eminently practical; his opinions on any vexed question are clear and well expressed. The changes which are found in this edition show very clearly that there has been an absolute revision, and this revision has made the book more valuable in all respects than the books which were issued some years ago.

A Treatise on "Unripe" Cataract. By WILLIAM K. McKEOWN, M.D., M.Ch., Surgeon to the Ulster Eye, Ear and Throat Hospital, Belfast; member of the Senate of the Royal University of Ireland; Lecturer, etc., etc., Queen's College, Belfast. Illustrated with nine plates and sixty original drawings. 202 pages, 8vo. Price, 12s. 6d. net. London: H. K. Lewis, 136 Gower Street, W.C.

This monograph of Dr. McKeown is marked by great candor and clearness of statement and detail. It is easily to be seen that this treatise is the result of dissatisfaction with the present condition of our knowledge regarding unripe cataract and the treatment thereof. Then comes his endeavors to put our procedure on a surer and more scientific footing. In all this time of fourteen years or more he finally gives us this monograph. Thus we are made aware that it is the outcome of mature deliberation and in nowise hastened by a fear of not being first in the field. The full explanation regarding all



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forms of cataract is excellent, and the change in nomenclature quite justifiable.

There is another great merit in this work, which is that the mind of the author has been quite openly judicial throughout, and thus he has avoided many pitfalls of previous writers. His operation, which especially applies to the immature cataract, is to insert a hollow needle inside the capsule of the lens and inject a weak saline solution. Then the capsule is ruptured. As much of the lens as will easily come out is first removed as in the mature cataract by the ordinary way of pressure outside the cornea, and the remainder by irrigation. The apparatus used is minutely described with many illustrations. It may also be mentioned that the illustrations throughout are numerous and good.

The author prefers as a rule the extraction with iridectomy as it gives more surely good average results with less fear of after complications.

The whole book fairly consolidates our previous knowledge. That which is original is put forward in a way which shows so plainly the singlemindedness and knowledge of his subject of the writer that we feel we most undoubtedly have in this work a valuable and trustworthy contribution to this most important branch of ocular surgery.

Practical Handbook of the Muscular Anomalies of the Eye.

By HOWARD F. HANSEL, M.D., and WENDELL REBER, M.D.
Philadelphia: P. Blakiston's Sons & Co., 1899.

This is one of the first text-books in handy form which has been compiled to deal exclusively with muscular anomalies. It has the advantage of conciseness, clearness and brevity. The presswork has been well done and the illustrations are excellent.

BOOKS RECEIVED.

Diseases of Children. Freyberger's Pocket Formulary, 1898.
London: The Rebman Publishing Co., 129 Shaftesbury Ave., W.C.

The Practice of Obstetrics: By American Authors. Edited by CHARLES JEWETT, M.D., Professor of Obstetrics in Long Island College Hospital, Brooklyn, N.Y. In one handsome octavo volume of 763 pages, with 441 engravings in colors and black, and 22 full-page colored plates. Cloth, net, \$5; leather, net, \$6. Lea Brothers & Co., Publishers, Philadelphia and New York.

The Canadian Practitioner and Review.

VOL. XXV.

TORONTO, MARCH, 1899.

NO. 3.

Original Communications.

HOFRATH FUCHS' CLINIC.

BY JOHN P. MORTON, M.B., L.R.C.P. (EDIN.), HAMILTON.

Having lately had a year's experience in the far-famed ophthalmological Clinic of Professor Fuchs at Vienna, I feel that its highly successful methods should be more widely known. This clinic represents half of the eye department belonging to the largest hospital in the world, and Professor Fuchs, who is its head, towers mentally, as he does physically, above those around him. He is always supported by at least five thoroughly qualified assistants, among whom the extensive work of the out-door, refractive, operative and ward departments is divided.

Out-door Section.—This consists of two rooms. In one of these the forty or fifty new patients of the day congregate. None are admitted after 9.30 a.m., at which hour the Hofrath and his assistants see all the cases presenting themselves and assign them to the external disease, refractive, ophthalmoscopic or operative departments according to the nature of the trouble. The work of the day then commences in earnest, and in the other room of this section, on an average fifty old and new cases are treated every day.

In simple conjunctival inflammations, lotions of boracic acid (gr. xvi. to f ʒj) or zinc sulphate (gr. i. to f ʒj) are at first used. When the secretion becomes more copious, however, and no ulcers of the cornea are present, a solution of nitrate of silver (gr. viii. to f ʒj) is applied, this being immediately neutralized by a common salt solution.

Conjunctivitis eczematosa or as here designated, phlyctenular conjunctivitis, is treated almost exclusively by dusting the affected area with calomel by means of a camel's hair brush. Many cases of chronic granular ophthalmia present themselves. When the blennorrhœa accompanying these chronic trachoma cases is slight, the solid sulphate of copper is used, especially upon the fornix; but if the papillary hypertrophy is marked, a nitrate of silver solution (gr. xv. to f ʒj) is preferred. Operative treatment will be referred to later. In epithelial abrasions and ulcers of the cornea, the sac is cleansed by a corrosive sublimate lotion, and sometimes this is injected subconjunctivally. Rest is assured to the iris by atropine, but if the ulcer is peripherally situated and has a tendency towards perforation some myotic is used to reduce intraocular pressure. The affected eye is kept tightly bandaged except when the secretion is profuse. Progressive ulcers go to the operating room. In this department, every other day, about ten patients each get 10 min. of a one-half per cent. solution of strychnine for chronic retrobulbar neuritis or optic atrophy. The injection is made at the right and left temple alternately and good results are obtained. Blennorrhœa of lacrymal sac seems to be especially common in Austria. Bowman's dilators are used in the attempt to remove the causative stricture of the nasal duct which is usually present. Contrary to the Edinburgh custom the inferior canaliculus is usually chosen for passing this instrument; the previous use of Weber's knife is seldom practised. If these cases resist five months' treatment the sac is generally extirpated.

Refractive and Ophthalmoscopic Departments.—At Moorfields Eye Hospital in London, atropine is used whenever any refractive difficulty presents itself, while at the Edinburgh Infirmary I seldom saw it prescribed. In Vienna Professor Fuchs adopts the middle course and uses it only in very difficult cases.

The paralytics are prescribed chiefly in young hypermetropes, and in those cases of apparent myopic astigmatism in which, after the use of the mydriatic, the astigmatism may show itself as hyperopic.

Homatropine is a great favorite, and examination is proceeded with two hours after its insertion. For the determination of refraction in the dark-room, we were taught to rely on the direct ophthalmoscopic method rather than on skiascopy (shadow test). When retinoscopy was used, however, the concave mirror was always employed. At Moorfields, on the contrary, stress is not laid upon the direct method in refraction determination, and moreover, no examination is complete without exact skiascopic results.

In Vienna a case is unfinished until the Javal-Schiotz astig-

mometer has been used, while at Moorfields and Edinburgh I never saw it once appealed to, as they say it only registers the corneal astigmatism. The lental astigmatism, however, is generally so small as to hardly affect the result.

Operation Department.—The operating room is the brightest I have ever seen, the end being simply a large window. Stationary and portable electric lights are also used. The floor is marble and the operating table is a glass-topped one. Work in this department commences at 10.30 a.m. and lasts until 1 or 2 p.m., and on an average there are seven or eight operations every day. All instruments, including Von Graefe's knife and the keratome, are boiled for four minutes before use.

Enucleations.—The well-known Vienna method is in vogue. A speculum is seldom used. Desmarre's elevators are preferred, and these, of course, necessitate an assistant. In enucleation of the right eye, the internal rectus and conjunctiva overlying are firmly taken hold of by a pair of strong, hooked forceps. This grasp is retained throughout the whole operation. The conjunctiva and internal rectus are divided just behind the forceps. Retaining hold of the stump of the internal rectus, the conjunctiva is severed around the whole extent of the limbus, and well undermined. A pair of blunt-pointed, straight scissors is then used, without the aid of a strabismus hook, to divide the superior and inferior recti and oblique muscles. The optic nerve is then cut, the eye is now drawn well forward and to the left, after which the external rectus is divided and the operation is complete. The conjunctiva with Tenon's capsule is sometimes drawn together by a running suture.

Mule's operation is sometimes done and a gilded ball is used for the artificial vitreous.

Evisceration is done for staphyloma but is never substituted for enucleation in sympathetic ophthalmitis.

Extractions.—These are never done in the wards. Pressure is avoided by the lids being separated by the fingers of an assistant; and when on rare occasions the speculum is used, it is removed as soon as the corneal incision is completed. When our Hofrath was operating, iridectomy accompanied extraction only in those cases where the pupillary reaction was very sluggish. With the object of preventing infection and of hastening healing he always made an extensive conjunctival flap, and after the extraction the conjunctival wound was often sutured by means of the finest silk. Capsule forceps are used instead of the cystotome, and I have seen the cataract lifted out bodily by means of these. The iris forceps replace Tyrrell's hook. The patient is very slowly and gently assisted from the table and allowed to walk to his bed, where he lies for three or four days and has the eye dressed every morning.

Iridectomy.—The keratome is used for all ordinary cases. In glaucoma iridectomies, with narrow anterior chambers, Von Graefe's knife is preferred. De Wecker's forceps scissors are used for snipping off the iris segment.

Extirpation of Lacrymal Sac.—This is almost of daily occurrence at Vienna, whereas at Moorfields two or three during the year would be a good average. If blennorrhœa of sac persists after five months' treatment, this operation is resorted to. After the sac has been thoroughly loosened and extirpated the upper part of the lacrymal canal is cleaned out by a fine curette. The epiphora which follows this operation never seems to be very troublesome.

Cauterization.—The advancing edge of progressive corneal ulcers is always touched with the fine red-hot electric cautery point. For corneal ulcers threatening perforation, Sæmisch's operation is very rarely performed.

Transplantation of Cornea.—I saw this tried about a dozen times, but the results were not very encouraging, as only in rare instances did the transplanted portion remain more transparent than its predecessor. A rapidly revolving circular trephine is used to remove the macular portion and to cut the required piece of the same size from some enucleated eye. The trephine should not go through Descemet's membrane.

Posterior Sclerotomy was done in a few cases of detachment of the retina, and in one case of cysticercus of retina. Good results were obtained.

Discission through sclera is quite a favorite where any difficulty is anticipated in lacerating the lental opacity.

Extraction of Foreign Bodies.—The delicate Asmus sideroscope is used in doubtful cases to decide whether a splinter of iron has entered or not. The X-rays are employed to determine its position by taking frontal and lateral photographs. A whole room is set apart for the large electro-magnet, which rarely fails to extract any magnetable matter.

Tattooing of disfiguring corneal opacities is a common operation.

Correction of Ptosis.—Our Hofrath favored Pannus' operation, both in complete congenital and old acquired cases. Von Graefe's excision of the fibres of the orbicularis and Pagenstecher's subcutaneous sutures were used only in mild cases. I did not see Eversbusch's advancement of the levator palpepræ sup. undertaken.

Correction of Trichiasis.—A combination of Jæsche-Arlt's and Hotz's operations is preferred in this, far besides fulfilling the requirements of the former operation, some of the fibres of the orbicularis are excised.

Correction of Ectropion and Entropion.—Many are the

operations done for each of these conditions. In the former, however, Kuhnt's excision of a triangular piece of the tarsal plate, and Snellen's sutures are oftenest used; while in the latter Gaillard's sutures and the simple excision of a piece of integument are practised.

Trachoma.—When operation is deemed advisable, Knapp's roller forceps are generally employed.

The Wards.—These contain about seventy beds. Exhaustive histories and minute descriptions are taken of every case. The work is much the same as in other hospitals. Cases of blennorrheal ophthalmia or blennorrhea neonatorum are isolated. During the first stage the conjunctival sac is syringed out with a corrosive sublimate, or boric acid lotion, but when the blennorrheic stage commences a solution of silver nitrate (gr. xx. to ℥j) is thoroughly painted over the conjunctiva and then neutralized with a common salt solution. When chemosis is great, free incisions are made with scissors; and in great lid swelling the external canthus is divided from without.

Cataract cases awaiting extraction have their bowels opened the day previous, and the nurses practise them in the maintenance of the downward position of the eye, so helpful to the surgeon. Wire-meshed masks are worn after the operation.

In closing I have to thank Hofrath Fuchs for the assistantship which I held under him, and for the many opportunities of operating which were permitted me.

THE LOCAL TREATMENT OF INTRA-UTERINE SEPSIS.

BY A. GROVES, M.D., FERGUS.

Hitherto the local treatment of sepsis of intra-uterine origin has been unsatisfactory, and in spite of modern aseptic and antiseptic methods the death record is yet by no means insignificant. The usual treatment by first curetting the uterus and afterwards washing it out every few hours with bichloride or some other antiseptic solution is far from being followed by uniformly good results. Continuous irrigation is a great advance upon intermittent washing, and in the cases in which I adopted it some years ago, I had good results, but the treatment is very wearisome and annoying to the patient on account of the length of time it requires to be kept up. In looking at a case of intra-uterine sepsis there is seen a soft, flabby uterus, with feeble contractile power; in the inside decaying shreds and remnants and open absorbents bathed in a highly septic and infective fluid. The problems are to get rid of, or to render innocuous the decaying matter, to destroy or remove the septic germs, to seal up the absorbents and to promote the contraction of the uterus. The treatment I now adopt and from which I have had unvarying success is as follows:

I first explore the uterus with my finger, and if there is a fragment of placenta of any size retained it is removed with the finger nail. I never now use a curette in a septic uterus, for to me it seems most unscientific and dangerous to blindly scrape the inside of a uterus bathed with septic discharge. Every piece of epithelium removed opens up a fresh absorbing surface, so that it might be laid down as a rule that the more thorough the curetting the greater the danger to the patient.

My next step is to pass a cylindrical glass or hard rubber speculum of large calibre, and through this wash the uterus thoroughly with warm water, passing the tube up to the fundus. The syringe I use is simply a hard rubber tube about the size and length of a No. 10 catheter, in fact a No. 10 gum elastic catheter would do very well, having attached a syringe bulb capable of holding an ounce or so of the fluid.

When the water flows back clear, I fill the syringe bulb with tincture ferri perchlor. pass it to the fundus and inject it. The uterus contracts and expels the fluid which is removed from the speculum without having come in contact with the vagina. If the iron does not come away at once a second syringe full is injected and it escapes immediately. The uterine cavity is again washed with water to remove any of the tincture which may otherwise trickle down and excoriate the vagina. This

treatment should be repeated within thirty hours, and if necessary kept up until all danger is past. The objects obtained by injecting the iron, are: first, the instantaneous destruction of every germ exposed to its action, for no germ or spore can withstand pure tincture of iron; in the next place all absorbents are sealed up so that even if it were possible that septic matter remained in the uterus it would not be absorbed; and lastly, the uterus is stimulated to contract. This treatment is safe, simple, satisfactory and painless. No special skill is required in carrying it out and there is no risk of injuring the patient. I believe a very considerable mass of placenta might remain safely in the uterus until it was disintegrated and expelled under the treatment above outlined. In proof of the satisfactory results I shall quote a few cases in the order in which they occurred and without selection:

CASE 1.—Mrs. H., had been confined a week before I saw her. On my first visit, March 28th, 1897, at 10 p.m. her temperature was 105, pulse 136, expression in every way bad, skin livid, chills frequent and severe, in fact her condition was apparently hopeless. The uterus was explored with the finger but contained only shreds, and acting on the principle that an attempt at scraping them away would open large absorbing surfaces, curetting was avoided. The uterus was thoroughly washed out with water, tincture ferri perchloride injected, and nothing further done locally. By the evening of the 29th the temperature had fallen to 103, and her condition greatly improved. Until 9 p.m. on the 30th, steady improvement went on and her temperature fell almost to normal, but at this time a severe chill came on and at 10 p.m. her temperature was 105. The uterus was again washed out and the iron injected, and by next morning her temperature had gone down to 100. This last chill was allowed to take place by overlooking the fact that the duration of the protection afforded by the iron was limited, and that not more than twenty-four or at most thirty hours should elapse until a re-injection was done. The injection was repeated on March 31st and April 1st, and the patient went on to an uninterrupted recovery.

CASE 2.—Mrs. G., on the fourth day after her confinement took a severe chill, temperature at 8 a.m. on morning after chill being 103. At this time the uterus was washed out and injected, and next morning temperature was 100, when a second treatment was given, after which steady progress to recovery took place.

CASE 3.—Mrs. E., on third morning after confinement the usual symptoms of septic infection were present, temperature 104. Then I tried the old routine treatment of washing out the uterus with carbolic acid and bichloride of mercury for two

days, but as the patient gave every sign of progressing steadily to death, I injected the tincture of iron and repeated it a second time, prompt recovery following.

CASE 4.—Mrs. D., first seen on the sixth day after confinement, when her condition was practically hopeless under ordinary treatment. Three treatments at intervals of twenty-four hours were all that were required to terminate the trouble.

The above cases appear to demonstrate that the treatment laid down is positive and unfailing in its results, for in no case where the treatment was carried out was there other than a successful issue.

LOCAL TREATMENT IN PUERPERAL INFECTION.*

BY ADAM H. WRIGHT, B.A., M.D.,

Professor of Obstetrics, University of Toronto; Obstetrician, Burnside Lying-in-Hospital, Toronto.

At the last monthly meeting of the Toronto Medical Society I gave some brief notes on the diagnosis and treatment of puerperal infection. On the following day I read Dr. Groves' excellent paper on "The Local Treatment of Intra-uterine Sepsis," which appears in this issue of the CANADIAN PRACTITIONER AND REVIEW, and decided to publish in the same issue my own views on the subject, as expressed at the meeting above referred to.

When signs of puerperal infection appear—such as headache, relative or absolute insomnia, rapid pulse (80 or more), vague impressions of cold, elevation of temperature—commence treatment at once without waiting for the grosser signs, such as very rapid pulse, very high temperature, rigor, delirium, etc. The early or premonitory symptoms, as pointed out by Ferré, have not as a rule received the attention they deserve. Puerperal infection does not show its signs suddenly on or about the fourth day, as described by some authors. The premonitory symptoms as mentioned above always appear not later than the second day. We should carefully watch for such symptoms, and when we recognize them carry out the proper treatment. It is not my intention to refer in detail to diagnosis and general treatment; but I may say that for general systemic treatment I rely chiefly on active catharsis, using especially calomel and epsom salts, with a view to having from four to twelve evacuations in twenty-four hours. A combination of headache, insomnia, chilly feeling, slight increase of pulse and temperature does not of course always mean puerperal infection; but free

* Abstract of paper read before the Toronto Medical Society, February 16th, 1899.

catharsis is likely to do good in any case. I have never seen it do any harm.

It is difficult to lay down definite rules as to when local treatment should be instituted, but it is better to commence too early than an hour too late. When undertaken it should be carried out in a thorough and systematic manner. If the lochia are perfectly normal, while the doubtful or premonitory symptoms are present, I generally wait a few hours to ascertain the effects of catharsis, and if there is no improvement, or if the symptoms become more severe, I commence the local treatment. I do the same in all cases when the lochia are at all offensive.

My rules for local treatment are as follows: Clean and inspect the vulva and vagina carefully, using a speculum, and being sure that every portion is seen. If the surface of the cervix is clean and the cervical lochia are sweet, do not invade the uterine cavity. If decomposition of clots or lochia is found in the vagina, use an antiseptic vaginal douche twice a day (a 1 per cent. solution of lysol, creolin, or carbolic acid). If so-called diphtheritic patches are found in the vagina or on the cervix, apply once a day a 20 to 90 per cent. solution of carbolic acid and then dust with iodoform. If sutures have been introduced for torn perineum, it is generally or always advisable to remove them. I dress the wounds thus reopened antiseptically.

WHEN UTERINE LOCHIA ARE OFFENSIVE.

Let an assistant administer an anesthetic. When the patient is anesthetized introduce the hand into the vagina and one or two fingers into the uterus. If portions of placenta, or membranes, or debris of any sort are found, scrape thoroughly and remove. There is no instrument so good for this purpose as the finger tip. After removing the debris, wash out with hot water (110° to 118° F.) that has been boiled, or with a weak antiseptic solution. Pack the uterine cavity tightly and the vagina loosely with iodoform gauze. Leave this gauze in position twenty to thirty hours, or two days. If temperature and pulse become normal and remain so, no further local treatment will be required. If temperature and pulse become again abnormal, repeat the treatment.

Some use the ordinary blunt curette, or the rinsing blunt curette; but neither is so effective as the finger-tip. Others use the sharp curette. This is not safe, because it is likely to open vessels which may absorb more poison. Many, perhaps the majority, employ the intra-uterine douche. This, if the work be properly done (as I fear it seldom is), answers very well; but it is really more troublesome than the method I have described, requiring, as it generally does, many repetitions.

If nothing has been found in the uterus and the discharges are not offensive, but still the patient becomes worse, the system is profoundly affected—very likely from absorption in rents of the fourchette, perineum, vagina, or cervix. In such cases local treatment of the uterine cavity will do more harm than good. On the other hand, all cases of sapremia may be cured by thorough local treatment. The methods I have described have been adopted after years of study and observation, and I am unable to give due credit to all sources of information, but I think I may mention especially Dührssen, Reynolds, Price, Garrigues and Smyly as men from whom I have learned much about methods in antiseptic midwifery.

Dr. Groves has evidently had good success with the methods he has described. I may say, however, that I think the intra-uterine application of tincture of iron is not entirely free from danger. Robert Barnes, many years ago, advised the use of intra-uterine injections of iron solutions for post-partum hemorrhage; but other obstetricians had many unpleasant experiences in connection with such treatment, and the procedure has now become almost obsolete. There may be less objection to the use of iron in septic endometritis, where we are not so likely to have large clots formed in the uterine cavity or sinuses; but still, I think there is always some danger of thrombi being formed which may pass into the general circulation, or may by their disintegration favor septic processes. If I adopted that line of treatment I think I would prefer to use the tincture of iodine, as recommended by Trask.

CARDIAC NEUROSES.*

BY JOHN FERGUSON, M.A., M.D.

It is often a feature of heart affections that when organic and serious they may cause the patient but little discomfort or occasion little alarm. In some of the disorders commonly spoken of as functional, the sufferer experiences great discomfort and often is much alarmed. In several of the nervous affections of the heart this is a very prominent feature—the alarm is out of proportion to the danger.

In attempting a study of the nervous affections of the heart, or those where the nervous symptoms predominate, it is necessary to obtain a clear view of the manner in which the heart is related to and governed by the nervous system. In the first place there is a very abundant supply of nerve fibres around the heart, especially about the base. This plexus of nerves is connected with the heart by means of various ganglia in its substance. It is also connected with the central nervous system by three nerve cords.

One of these cords passes between the cardiac plexus and last cervical and first dorsal sympathetic ganglia. It carries to the heart impulses that augment the force and increase the frequency of the heart's action. These nerve fibres come from the second and third dorsal spinal and enter the sympathetic ganglia.

The second cord passes from the cardiac plexus to the brain by way of the pneumogastric. This nerve conveys to the central nervous system the impression as to the effort the heart is making to overcome arteriole resistance. If this be too great this nerve inhibits the constructor centre and lessens the work the heart has to perform. In this way it is called the depressor nerve of the heart, as it relaxes the arterial tension.

The third nerve passes from the central nervous system to the cardiac plexus by way of the pneumogastric. This nerve really arises from the roots of the spinal accessory. From this origin it passes to the vagus, thence to the cardiac plexus and finally to the cardiac ganglia. The function of this nerve is to slow the action of the heart. It restrains the action of the first nerve cord, or the one that comes from the last cervical and first dorsal sympathetic ganglia. This nerve is inhibitory on the heart, as the one from the sympathetic is augmentative in action. The one from the spinal accessory roots is anabolic. The one from the sympathetic ganglia is katobolic. The former lessens action, while the latter increases it.

It is through this nerve mechanism that many of the nervous

* Address at Clinical Meeting of Western Hospital.

disturbances of the heart are produced. Strong stimulus of the vagus branch controls the sympathetic, and the action of the heart is thus restrained, because the sympathetic is restrained. The heart has a great store of inherent energy of its own. It is this idio-muscular power to act that is the real cause of cardiac movements. But these movements are regulated by the above system of nerve supply, and this regulation is necessary to the maintenance of cardiac action. Anything that irritates the sympathetic produces undue rapidity, while irritation of the vagus, especially the spinal accessory communication, results in undue slowing of the heart's movements.

In somewhat similar manner there is only one set of nerves that act upon the arterioles. These nerves are vascular constrictors. They act upon the muscular fibres in the small arteries and stimulate them to contract. This raises arterial tension. The vaso-dilators act by inhibiting the vaso-constrictor nerves, and permitting dilatation to take place in the arterioles, under the interrupted pressure from the heart and the continuous pressure from the larger arteries.

Sudden stimulation of the vaso-constrictors may, through such an extra amount of work upon the heart, cause speedy death, the heart being in the condition of asystole. Strong emotion, grief, joy and cold are efficient causes in this connection. If the nervous mechanism is normal and the heart of sufficient strength, this resistance is overcome by the afferent nerve from the heart, carrying to the nerve centre the sensation as to the overwork the heart is doing. This sensation in the centre starts the efferent inhibitory impulse to the vaso-constrictors. These latter are held in check, and the arterial resistance sinks. But should this adjustment not take place promptly enough, or of sufficient amount, the results may be most disastrous, to the extent of sudden death, or the production of gradual heart failure going on to a fatal termination in some cases, or difficult of cure in others.

The motor nervous mechanism of the heart and blood vessels falls into two halves: First, that which acts directly upon the heart and arteries, the cardio-augmentor and vaso-contractors; and secondly, the cardio-inhibitory and vaso-dilators. These latter do not act upon muscle but upon the augmentor and constrictor nerves.

A few words now on the sensory nerve supply and distribution. It has just been shown that there are three cardiac nerves. Two of these come by way of the vagus; and one, the lower, by way of the sympathetic. It has been shown that these really arise from spinal roots; and, in the case of the lower vagus cardiac nerve, from the spinal accessory, while the augmentor arises as low as the third dorsal. These cardiac

nerves carry sensory fibres. In this way the heart is brought into a wide sensory relationship. The sensory nerves radiating around the back and front of the chest and down the arms have the same spinal origin. The connection of the heart with distant portions of the body through the sensory nerve system has been greatly cleared up by the researches of Lussana, Sturge, Ross, McKenzie and Gaskell.

The cardiac neuroses may be divided for convenience of study into the motor and sensory. The motor derangements would include bradycardia, tremor cordis, delirium cordis, tachycardia, palpitation, arrhythmia; while the sensory derangements are limited to the forms of angina.

First, then, let us look at the symptom group of bradycardia. This diseased condition has been studied with much care by Huchard. The condition was recognized by Hope, Adams, and Stokes. Riegel, among the recent German writers, deserves special mention for the work he has done on this subject. Perhaps, however, none has placed the whole case before the medical profession in a clearer light than Dr. G. W. Balfour, whose writings have been so valuable on cardiac pathology and therapeutics. This condition may be divided into the true bradycardia, and the false, as did Laennec, in 1829. In true bradycardia the heart and pulse are synchronous, while in the false they are not, there being more heart beats than pulse waves, as some of the cardiac systoles are too weak to produce a radial pulse. This distinction can easily be made, and ought to be made, as it is of much importance, both in prognosis and therapeutics.

Bradycardia may be caused by several conditions. One of these is toxic agents in the blood, such as influenza, uremia, the convalescence of typhoid fever and pneumonia, diphtheria, lead, digitalis, alcohol and some others. The condition of exhaustion, as in the recovery from rheumatism, during an attack of jaundice, after certain diseases, in anemia, from insufficient nourishment, are causes in some instances. It is met with as the normal condition, the person always having had a slow pulse and heart. The real cause of *true* bradycardia in the great majority of cases is some diseased condition of the nervous system. In those cases that have lasted a long time, with a constantly slow heart, the disease is almost always in the cervical region, and effects the origin of the spinal accessory; and, consequently, produces a continuous inhibitory action on the heart. These patients are mostly epileptic, and usually die in an epileptic fit or a faint. Sooner or later there is dilatation in these cases.

The treatment must be directed to the cause. In toxic cases and those due to debility, as in anemia, the course is clear, and

much may be done. In those of disease in the cervical cord, with epilepsy, the outlook is gloomy enough. No drug will undo the results of injury to the cervical region of the spine. In some of the cases where syphilitic meningitis is suspected, the use of the iodides and mercurials may have a favorable action. Not much can be hoped from surgical interference, even though the cervical spine may have been injured.

Tremor cordis is a very interesting condition. It comes on without a moment's warning. After a number of almost imperceptible beats, the heart starts off again as if nothing had occurred. The explanation is an imperfect systole, due to reflex inhibition. This is repeated a number of times, the heart meanwhile becoming more and more distended. A vigorous systolic action then takes place, the heart is emptied, and everything goes on as usual. This is what is generally spoken of as fluttering at the heart. The pulse suddenly drops to an almost imperceptible thread. This form of heart trouble is always reflex, the source of irritation being some digestive derangement. It is not caused by emotion, grief, anger, nor excitement. While it may occur in the young, it is usually met with among those of advanced years. The treatment is that of the digestive disorders causing it. This consists in proper exercise, as the sufferers are usually sedentary in habits; suitable regimen; and the needed corrective medicines for constipation, flatulence, or any other digestive disorder.

Delirium cordis is an extreme degree of irregularity. It is met with in cases of true bradycardia when the ventricles are becoming markedly dilated, and compensation for their work failing. It has been also noted in cases of mitral stenosis. In one case under my care, a woman, aged 36, with mitral stenosis of rheumatic origin, there is now at times an extreme amount of delirium cordis. It would appear that the principal feature in the irregularity of the heart's action is the want of synchronism between the auricles and ventricles, these portions of the heart having taken on an independent rate of systole. Prof. McWilliams contends that a fibrillary contraction of the ventricular muscle is an important factor in the causation. This is a very serious condition. When mainly due to the evil effects of work and worry on a dilated heart, much may be done to prolong life and improve the condition of the patient. When this condition of heart is found in conjunction with considerable dilatation, the prognosis is very unfavorable. During an attack of delirium cordis, the only drug that appears to have any influence is digitalis in large doses, say, a drachm every two, three or four hours for some time.

Palpitation is another of the motor neuroses. Bradycardia, tremor cordis, and delirium cordis are usually diseases of

advanced life, while palpitation is more frequent among the young. I have a personal knowledge of a case of severe attacks of palpitation, the patient being in his eighty-fourth year. When this condition occurs alone, it is not of serious import, as a rule; but when it complicates some of the organic forms of heart trouble, the danger may be very great. Palpitation is usually met with in delicate, anæmic persons, the attacks being induced by reflexes, or emotion, not by exertion. During an attack the heart and large vessels beat violently and often rapidly. There is, however, no change in the radial pulse, except that of being more frequent if the heart's action is more frequent than normal. In this respect there is a total difference between reflex palpitation and the forcible heart's action due to exercise. In the latter, the radial pulse is full and bounding. Further, the latter disturbance ceases on taking rest; while the former does not, and often comes on when the person is at rest. The cause of these attacks is some nervous stimulus carried to the pneumogastric centre, restraining its influence. The vagus is no longer able to inhibit the sympathetic, and so the augmentors, for the time being, run off with heart. This is the view held by the best authorities on cardiac affections; and one's own experience confirms it. The treatment is, therefore, that of the derangements causing the reflexes, as emotion, dyspepsia, ovarian irritation, or toxic conditions, as tobacco and alcohol. These, however, may be very difficult to remove or control.

Tachycardia is that condition where the heart beats abnormally fast, without forcible impulse or any disturbance in the action of the larger vessels, and with a regular but very small pulse. This is the condition of the new-born infant. The frequency of the heart's action and pulse may be as much as three hundred per minute. In this remarkable condition of the heart the person may not be conscious of the disturbance. There is a very short and imperfect diastole, followed by a short, sharp systole. By this mechanism, though the heart may contract two hundred times per minute, no more blood is thrown out than when it is acting normally at the rate of seventy. In those conditions of low arterial tension, such as in Graves' disease, the heart is rapid. Marie has clearly pointed out the relation between low tension and heart hurry. There is a complete difference in the quiet, quick action of the heart in tachycardia to the violent, throbbing action of exophthalmic goitre. They differ both in clinical and pathological characteristics. It may be laid down as a rule that all forms of tachycardia, after infancy, are morbid. Another statement that may be dogmatically made, is that this is a symptomatic condition.

The causes of tachycardia may be grouped under the headings:

Those belonging to the heart itself and vessels; those of general character; the toxic cases, and those of nervous system origin. Under the first group would come cases of fatty, weak and dilated hearts, often due to faulty circulation through the heart muscle. Mitral stenosis is sometimes accompanied by great rapidity of heart action. The second group would include such cases as general debility and anæmia, where the heart muscle becomes weakened and augmentor action is increased, or inhibitory lessened. The third group would include those cases due to the excessive use of digitalis, tobacco, coffee, and many other agents that act upon the vagus, and the sympathetic is set free from control. This group would include most cases of tachycardia due to fevers, though some of these cases are due to the reduced arterial tone. The fourth group is the most important, as it is likely to contain the more typical and protracted cases. The action of the vagus may be destroyed by some pressure upon it, as a tumor; or the disease may be central and of some degenerative type. Many reflex conditions and emotions give rise to this derangement. These reflexes and emotions are sometimes most difficult to bring under control. It has been suggested by some authors that there may be a sort of discharge action in the sympathetic centres. Dr. Balfour states that "careful inquiry will in every case discover some previous heart strain sufficient to originate an endocarditis or a myocarditis, some history of an overwhelming emotion, or the abuse of some cardiac poison." The chain of morbid processes once set agoing, it may require years to cure them. Dr. G. A. Gibson states that of six *post-mortems*, there was fatty degeneration in one, chronic myocarditis in two and dilatation in three.

The prognosis and treatment depends to a great extent upon the discoverable causes. In the elderly it is a dangerous condition, as the heart may suddenly become asystolic and death take place when not expected. All irritating conditions and constitutional diseases require attention. Those cases due to disease in the heart may be greatly improved by proper rest and heart tonics, especially if there be any dilatation. In such a case digitalis often affords great relief. Those cases of poisons can only be treated by the correction of the occupation or habit that causes the intoxication. Cases due to tumor pressing the vagus, disease of the vagus or central nervous system, are very serious. In recent cases caused by heart strain, belladonna is very useful. Where paralysis of the vagus is suspected, digitalis should be used. In cases of over-action of the sympathetic, bromide, chloral and opiates, separately or combined, ought to be tried. The long-continued use of digitalis and arsenic cures some cases where the nutrition of the myocardium is at fault.

In cases with dilatation, the employment of baths and exercises do good.

Having said this much on the motor disturbances of the heart, it remains to say a few words on that classic condition, the great sensory disease of the heart, angina. This disease is classified by many as one of the cardiac neuroses, because the pain in most instances is the prominent symptom. But pain may not always be present, as its place is sometimes taken by a sensation of anxiety, breathlessness, or impending dissolution.

With regard to etiology, heredity plays an important rôle, the disease following some families through several generations, as the Arnolds. In this regard it resembles tachycardia, which Dettinger traced through as many as four generations. It is much more frequent among men than women. This is accounted for by the fact that the former are called upon to fulfil more arduous duties, and are more frequently subjected to those conditions that cause heart strain, hypertrophy and dilatation. Long continuance in severe exertion gives rise to cardio-vascular sclerosis.

Prolonged mental work and a life of worry and anxiety have a tendency to produce arterial sclerosis. This would, of course, act injuriously on both heart and kidneys, as has been well shown by Clifford Allbutt.

Certain poisons, either of disease or of a chemical nature, have a marked tendency to impair the health of the myocardium and lead up to attacks of angina. Among these should be mentioned as occupying a first place, gout and rheumatism. Syphilis may stand in a causative relationship by producing disease of the arteries, more especially the coronary arteries. Fevers also may start into existence the faulty nutrition of the myocardium. Toxic agents, as alcohol, tobacco, tea, lead and others have a similar power.

The principal exciting causes are: Exertion of some kind, especially after a meal. Some constrained position during sleep is quite sufficient to induce an attack. Emotion, as grief or joy, has often brought on an attack, and the anxious condition of expectancy, as in the case of those who are to be called upon to make a public speech. Exposure to cold may cause such a strain on the heart as to bring on promptly a severe or fatal seizure.

Some writers, from W. H. Walshe down, have been in the habit of speaking of a pseudo-angina. Dr. G. W. Balfour does not agree with this. He is strongly of the opinion that angina has always a morbid substratum. There is some fault with the nutrition of the cardiac muscle.

The main changes that have been found in this are a chronic inflammation of the myocardium. With this there may be

fatty or fibroid changes. The endocardium is sometimes found diseased, as the result of former inflammation. There may be valvular disease, though this does not specially cause anginous attacks. Throughout the arterial system there is usually a widespread arterial sclerosis, and arteritis deformans. There may be much obliteration in the arterial system. This is specially important in the event of its occurring in the coronaries.

The cause of the pain has given rise to much discussion. Heberden, Latham and Rosenbach have contended for the view that it is a cramp-like action of the organ. Others, Brunton, Chambers, Traube and Duncan, regard the pain as due to a stretching of the heart walls. Balfour, and many with him, such as Gibson, inclines to the view that, under exertion, the heart becomes suddenly ischæmic. This is well known to cause severe pain. Then there is the opinion that there is a neuralgia or a neuritis of the cardiac nerves. Peter, Huchard and several other eminent writers take this view. The opinion seems well founded that, when the heart is called upon for some sudden exertion or powerfully stimulated by emotion, or taxed by general arteriole contraction, as in cases of poison, or cold, it cannot at once obtain the blood needed. Either the coronaries are diseased, or the nutrition of the myocardium is bad; and there is at once caused an ischæmic condition. This ischæmic condition is the cause of the pain; and the lack of tone in the heart the cause of the asystole and sudden death.

The varieties, as the reflex of Landois, the vasomotor of Nothnagel, the neurasthenic, and pseudo-angina of Walshe, need not detain us further.

The symptoms can be summed up in a few words. The pain is usually intense, and, almost always, radiating in character. There is a marked shallowness of breath, as the sufferer seems afraid to perform even so necessary a movement. The patient leans against the nearest object, and stoops forward. The heart action is weak, often irregular, and pulse small. The countenance usually is pale, but may be livid, and is extremely anxious-looking. There is a terrible sensation of impending death. The extremities are cold, and the surface bedewed with perspiration. Some cases pass through the attacks without pain, the well-known angina *sine dolore*. This is generally so when the heart becomes dilated; and, in many cases of angina, when dilatation becomes prominent, the anginous attacks cease.

Improved views of the pathology have done much for improved plans of the treatment. In addition to the relief we are often able to afford the patient during the attacks, we can do much for them in the intervals. Thus it is that the treatment falls into two divisions, that of the paroxysm, and that of the

interval. The attacks are treated by the administration of drugs that relax the arterial system and relieve pain—nitroglycerine, amyl nitrate, chloroform, morphia, and stimulants in cases of organic disease of the heart; but not in the vasomotor forms. Erythrol tetranitrate is likely to be a valuable addition to our list of remedies. In the intervals every attention should be given to the health of the person. Gout, syphilis, arterio-sclerosis should all receive due attention. The proper use of the iodides, as vascular alteratives and stimulants, cannot be too highly valued. When the vascular system has been unlocked by their use for some time, digitalis will often prove of the utmost value, by way of improving the nutrition of the myocardium, through a better coronary circulation. Strychnine and arsenic are very useful. The latter is an excellent heart tonic. All improper habits of diet and drink must be corrected, and undue exertion and conditions of too severe mental strain absolutely forbidden. By these means, the patient may be spared many attacks, and many years of useful life be measured out to him.

OBSTETRICAL METHODS IN DUBLIN AND LONDON.

BY K. C. McILWRAITH, M.B.

The subject-matter of my paper is culled from notes which I made in the Rotunda Hospital in Dublin, and the Queen Charlotte's Lying-in Hospital in London last summer. On some points which did not come under my personal observation I have supplemented my notes by references to the teaching of these two institutions. I shall speak first of some points in the conduction of normal labor in the Rotunda.

1. The patient is delivered in the left lateral position, whether the case be normal or instrumental.

2. For the diagnosis of the position of the fetus reliance is placed on abdominal palpation first; then on auscultation, and then on vaginal examination. Two positions are recognized, viz., occiput to the left and occiput to the right anterior; the occipito-posterior positions being looked upon as variations of these.

3. One vaginal examination is advised, preferably just after the rupture of the membranes, to find if there be any presentation or prolapse of the cord. No more are made unless delivery be unaccountably delayed.

4. Before any examination is made the external genitals of the patient are washed with soap and water. The operator's hands are cleansed by scrubbing with soap and water, washing off in fresh water and immersion in a perchloride of mercury solution of a strength of 1-500. When a lubricant is necessary, creolin emulsion (half an ounce of creolin to a gallon of hot water) is used.

5. To preserve the perineum. When the head is distending the perineum, push it forward by means of the heel of the right hand placed behind the anus, taking care not to touch the perineum itself at all. Pass the left hand between the mother's thighs from in front, and with it support the presenting part, not allowing it to be delivered at the height of a pain. If done properly and at the right moment the effect of this forward pressure is to aid the action of the levator ani muscle, to take advantage of all the space below the symphysis pubis, take pressure off the perineum, and assist in maintaining flexion. If done too soon it only serves to jam the head against the symphysis and stop delivery. If the perineum require much stretching a douche of hot creolin solution is allowed to play upon it.

6. The time and manner of delivering the placenta. During the process of delivery one hand is placed on the fundus uteri, and is not removed from it till the last pin in the binder is inserted. In tying the cord all loops of it are pulled gently out of the vagina, and a ligature placed on it just outside of the vulva. The placenta is expelled as soon as it has left the uterus, and there are three signs that show when that has occurred:

(a) The ligature at the vulvar entrance moves away from it four or five inches as the placenta descends.

(b) Immediately after the delivery the uterus, containing the placenta, is telescoped as it were, into the vagina, and the fundus is not much above the symphysis. When the placenta is expelled into the vagina, the uterus is pushed upwards and the fundus rises nearly to the umbilicus.

(c) While the uterus contains the placenta it is quite immovable. After the expulsion of the placenta it becomes freely movable. As soon as it has been ascertained by these signs that the placenta has left the uterus, the fundus is rubbed a little to secure a firm contraction, and the uterus, pressed firmly downwards in the direction of the vaginal outlet, easily thrusts the placenta out. The relative positions of placenta and uterus are excellently figured in Dr. Jellett's little book.

7. Perineal lacerations are repaired immediately with silk-worm gut sutures.

8. Ergot is never given until the uterus is empty.

9. The binder is applied very tightly.

The pads used while the mother is in bed are wrung out of perchloride of mercury solution 1-500.

The Queen Charlotte's Hospital practice differs very widely from this, notably in the following particulars:

1. In every case an ante-partum douche of perchloride of mercury, 1-3000, followed by boracic solution, is given. On examining a patient after the administration of this douche the vaginal walls feel quite stiff and, for a short time, devoid of lubricating secretion. The same douche is given to every patient post-partum.

2. Numerous vaginal examinations are made, the diagnosis of the position of the fetus being determined mainly by this means.

3. For the delivery of the placenta the practice is to wait half an hour with the hand on the fundus uteri, and then attempt expression from the uterus or vagina, as the case may be.

I shall go on to speak now of

ANTE-PARTUM HEMORRHAGE.

At the Rotunda.

I. ACCIDENTAL.—1. *Open*—(a) Before the onset of labor pains, plug the vagina and await the pains and dilatation of the os. (b) After the onset of labor pains, rupture the membranes. 2. *Concealed*—Parro's operation if the patient's life be in danger.

II. UNAVOIDABLE.—1. Before the os admits two fingers, plug the vagina and await dilatation. 2. After this, do bipolar version and bring down a leg.

At Queen Charlotte's, in open accidental hemorrhage the

practice is to rupture the membranes in all cases, and *not* to plug the vagina. In cases of placenta previa, Champetiere de Ribes' bag is being tried, the hope being that it will lessen fetal mortality. Where the placenta is directly over the os it may be perforated with a sound and the bag thrust through it. In this way the placenta is not so widely detached as in some other methods, and there is a better chance of saving the child. Hemorrhage can be easily controlled by pulling on the tube of the bag which remains outside the vulva. For this suggestion I am indebted to Dr. Porter Mathew. I do not know whether it is original with him or not.

FORCEPS.

In the Rotunda, axis-traction forceps is the only kind used. The pattern recommended is Barnes' long forceps; with Neville's axis-traction apparatus adjusted to it. The advantage of this instrument is that the traction apparatus is entirely outside the vagina when the forceps are in position. It is laid down as a rule, to which of course there are exceptions, that the greatest diameter of the head must have passed the brim before the forceps are applied. The reason given for this rule is that the forceps elongate the diameters which require diminishing. In the case of flat pelvis, however, Milne Murray* has shown that this is incorrect. He applied a cephalotribe to the head of a still-born babe, and found that when the one blade was applied to the occiput and the other to the sinciput (as in the case in flat pelvis, where the head presents with the sagittal suture in the transverse diameter), the transverse diameters were not increased by a moderate amount of pressure, and only increased by one-eighth of an inch when a mutilating degree of pressure was applied. These experiments were repeated and confirmed by Dr. Porter Mathew, who used, in addition, the phantom pelvis.† Before the forceps are applied they are sterilized by boiling and placed in creolin solution. The operator's hands are sterilized as described above. The external genitals of the patient are washed thoroughly with soap and water and then doused with creolin solution. Two fingers are passed into the vagina and its walls scrubbed with a small piece of soap, and then doused out with creolin solution.

In the Rotunda, the forceps are removed before the head is delivered, while at Queen Charlotte's they are left on.

PELVIC PRESENTATIONS.

In Dublin, pelvic presentations are left to nature. If assistance becomes necessary, the first plan resorted to is firm pressure

* "Effects of Compression of the Fetal Skull, with special reference to Delivery in Minor Degrees of Flat Pelvis." *Edinburgh Medical Journal*, November, 1888.

† "Clinical Observations on Two Thousand Obstetric Cases." London, 1898.

on the fundus. Should this fail, the attempt is made to bring down a leg. If this cannot be done, recourse is had to traction by means of two fingers placed in the anterior groin. If this fail the fillet is used. For the delivery of the after-coming head the Prague method is used when the head is in the pelvis; when it is above the brim, Martin's method or Smellie's method. A noticeable feature in the conduction of these cases is the entire absence of instrumental interference. Forceps to the breech are regarded as difficult to apply and apt to slip or do injury to the child; for the aftercoming head they are regarded as too slow. The blunt hook for traction is considered dangerous. In Queen Charlotte's Hospital the usual practice is to do cephalic version, if the case come in soon enough.

CONTRACTED PELVIS.

In the minor degrees of contracted pelvis the opinion published by Dr. Jellet is that the head should be allowed to mould through. In a lecture last summer he stated that he had now changed this opinion, and advocated prophylactic version in these cases. Forceps is not used in breech cases. The pelvic diameters, conjugate and transverse, are measured by means of Skutsch's pelvimeter. Where the conjugate is so contracted as to necessitate the induction of premature labor, the time at which this should be brought on is determined by Muller's method. The patient is examined at intervals of a few days. Two fingers are placed in the vagina to palpate the head. An assistant then attempts to press the head through the brim from above. On the first day on which this fails to be accomplished, labor should be induced. In London, forceps and version each has its advocates.

OCCIPITO-POSTERIOR CASES.

In Dublin the practice is to leave these cases to nature, it being found that most of them will rotate themselves. If labor is unduly prolonged the forceps is applied.

In London the hand is introduced into the vagina as soon as the position is recognized, and the occiput rotated to the front. The shoulders are rotated at the same time by the other hand on the abdomen.

I have given only a brief outline of the treatment in some points. Those who wish to follow further details of the Rotunda methods will find them in "A Short Practice of Midwifery," by Dr. Jellet, late Senior Assistant at the Rotunda. I am not aware of any publication which officially represents Queen Charlotte's Hospital, though the majority of Dr. Mathew's "two thousand obstetric cases" were confined there.

PROGRESS OF GYNECOLOGY.

BY A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. Eng.,

Fellow of the American and British Gynecological Societies; Professor of Clinical Gynecology in Bishop's University; Gynecologist to the Montreal Dispensary; Surgeon-in-chief of the Samaritan Hospital for Women; Surgeon to the Western General Hospital.

On the way to the meeting I had the pleasure of hearing an address by Martin, of Berlin, on the "Progress of Ovariectomy" in the last twenty years. It was a remarkable paper by a remarkable man. He has adopted the vaginal route to a great extent, and he closed his paper by giving the results of 131 vaginal laparotomies for diseased ovaries and tubes and for retroversions, ovarian cysts and small fibroids, etc. Out of these 131 cases he lost two. Since my return from Berlin I have performed a number of these operations at the Samaritan, Western, and at my private hospital with most gratifying results. These will be reported in full later on, but in the meantime it is of interest to note that all the patients operated on by the vaginal route made a much quicker recovery than those by the abdomen. Although they included pus tubes, tubal pregnancies, retroversion with fixation, cystic ovaries and closed tubes which were opened, yet not one of the patients died. Another striking advantage was the absence of the abdominal scar, and the pain from the incision, which these patients generally suffer from very acutely, was entirely absent. In fact, most of these patients did not require any anodyne whatever. During the discussion at the recent meeting of the British Gynecological Society a gentleman reported a number of cases by the vagina with bad results, and other speakers all pointed out with great stress that the vaginal route is not suitable for large tumors of any kind, whether fibroids or collections of pus, because it is almost impossible to deal with the adhesions which are so often present in these cases. In properly selected cases I feel sure that the vaginal route has immense advantages over the abdominal one.

One of the most interesting figures at the meeting was Doyen, of Paris, who showed two new instruments; one for automatically holding open the abdominal incision, and the other his instrument for arresting hemorrhage without ligatures by means of an enormously powerful crushing machine. The broad ligaments with the ovarian artery is seized and compressed for a minute with such force that it is completely crushed, and when it is taken off no blood flows. I was told in

Paris that it was not to be depended upon, as several times secondary hemorrhages had followed. I would prefer to trust Dr. Skene's electric clamp which desiccates the artery. One of the most interesting features of the meeting was a cinematographic representation of an abdominal hysterectomy given by Doyen in one of the large halls of the University, at which there were over six hundred doctors present. He is a very rapid operator, and has devised a new method which only requires four minutes from the first incision until the whole uterus including the cervix is in the dish. The salient features of his method are to put a clamp on the two ovarians, and then to catch the cervix through an opening in the vagina in Douglas' cul-de-sac, and draw it up, forcibly tearing it away from its connections laterally and to the bladder in front. The uterine arteries are thus distinctly brought into view and clamped. He only takes two or three minutes for removing the uterus, and some eight or ten minutes more are used in tying the arteries and closing the opening in the pelvic peritoneum. I had the pleasure of being one of eight or ten who saw Doyen do two total abdominal hysterectomies for fibroid at the Royal Infirmary, and he did one of them quite as quickly as the six hundred saw him do it by the cinematograph.

Another interesting figure was Morisani, of Naples, a gentleman very short in stature, about three feet six, but a giant in intellect, who gave an address on symphysiotomy in French. He was followed by Dr. John Moir, of Edinburgh, ninety-five years of age, who told of the improvements in obstetrics and gynecology in his lifetime.

The hottest discussion of the meeting was on Dr. Milne Murray's paper on "The Use and Abuse of the Forceps," and incidentally, Dr. Japp Sinclair's excellent paper read at Montreal last year, condemning the too frequent and too early use of the forceps, came in for a great deal of abuse.

Dr. Sinclair stated that the forceps was responsible for a great deal of injury to women who were confined in the neighborhood of Manchester. It was evident that the majority of those present at the meeting were general practitioners who used the forceps to save time, and did not want to be reproached for causing puerperal lesions. [This is certainly a remarkable statement; but I venture to hope that it is incorrect.—A.H.W.]

There were several interesting papers on the proper time for removing pus tubes, and the general feeling was that it was safer to operate during the interval than during the acute attack, as is also the case in appendicitis. There was also a very warm discussion as to the relative advantages of the abdominal and vaginal route for removing pus tubes, and the general feeling

was that it was easier and safer to remove them by the abdomen. As disease of the vermiform appendix frequently complicates pus tubes, it was pointed out that the possibility of having to remove it in any case was a sufficient reason of itself to induce us to operate by the abdomen. Dr. Macan, of Dublin, laid great stress on the importance of making a careful bimanual examination under narcosis before deciding upon the vaginal route. Landan, of Berlin, was strongly in favor of the vaginal route even for bad pus cases, and he has the courage of his convictions, for I saw him removing the uterus and both tubes and ovaries by the vagina in a very bad case while I was in Berlin. One thing was very evident on this occasion, that while it is difficult to remove large pus tubes even after the splitting of the uterus in two and consequently sacrificing it, it is well-nigh impossible to remove them through an opening in either the anterior or posterior vaginal vault without removing the uterus. Some years ago I attempted to do this and was compelled to abandon it by the vagina and to complete the operation by the abdomen. This combined operation by the vaginal and abdominal route was the subject of a long discussion at the December meeting of the British Gynecological Society. Dr. Arthur Giles summed up the general opinion very concisely by saying that the *raison d'être* of the vaginal operation was to obviate the necessity of opening the abdomen, and that there was nothing that was done by the combined method that could not be done by the abdominal alone; consequently, it seemed to him that to open the abdomen after beginning an operation through the vagina was practically a confession of failure. It meant that the operator had found himself unable to carry out his original intention.

It was not his experience that abdominal operations for pyosalpinx had a specially high mortality, for it happened that a rather large proportion of his cases of abdominal section had been for pyosalpinx, and so far there has been no death among them. I might add that my own experience agrees with that of Dr. Giles, as I have often been agreeably surprised to see patients recover from the most serious operations for pus tubes when both the assistant and myself had thought it hardly possible.

Conservatism in gynecology has been receiving a good deal of attention during the last few months. Up to within a year or two ago it was the custom to remove both tubes and ovaries when one tube was diseased—even though the other tube and both ovaries were apparently healthy. When this was done in young women the artificial menopause brought on so suddenly was accompanied with great inconveniences, so much so that many of these young women declared that they regretted having had the operation performed. This led us to

remove only the tube and ovary on the affected side, and although we were occasionally reproached for not making a complete cure by removing both, mostly in cases of sclerotic ovaries, yet these cases were much fewer than those who complained of the miseries of the premature menopause. More attention was then directed to the matter, and now we frequently leave both ovaries, even where we have to remove both tubes for suppuration. Nearly a year ago such a case came under my care, a young lady who was infected by her fiancée with gonorrhea, leading to two very large pus tubes. He so regretted his crime that he was anxious to make amends by marrying her, and she begged that I might leave her ovaries. The pus tubes were therefore removed without tying the ovarian artery or otherwise hurting the ovaries, except that the adhesions were stripped off them and they were carefully cleaned. This patient made a splendid recovery and is now very happily married. She menstruates regularly and normally and has all her womanly feelings and attributes. As I used cat-gut to tie off the tubes at the corner I would not be surprised to learn that she had become pregnant. In many other cases I have removed three-quarters of one or both ovaries and part of one tube with very satisfactory results. As many of these were done during the last few months it is too soon to expect them to become pregnant, but there is no reason why this should not occur. Since beginning this article I have operated on a lady for retroversion with fixation, who was most anxious to have children. I found both tubes closed and imbedded in adhesions, the result of a severe attack of pelvic peritonitis, from which she nearly died eight years ago. Both ovaries and tubes were torn almost to shreds by the enucleations, and nearly an hour was spent in patching them up with fine silk; but finally a good tube was left through which a probe could be passed into the uterus. She is making a remarkably pleasant recovery from the operation, and I have yet hopes of her becoming pregnant.

250 BISHOP STREET, MONTREAL.

THE CRUSADE AGAINST TUBERCULOSIS.—The editor of *The Practitioner* (London, England) says in the February issue: "I have to thank the CANADIAN PRACTITIONER for a very kindly reference to my humble efforts to start a national movement for the repression of tuberculosis. I may perhaps be pardoned also for feeling gratified at the manner in which the movement is spreading all over our own 'tight little island.' It is particularly satisfactory to note with what interest the crusade is regarded by the public, for, as I cannot repeat too often, it is on the earnest and general co-operation of the public that the success of the movement must mainly depend."

Society Reports.

TORONTO CLINICAL SOCIETY.

The fifty-first regular meeting of the Society was held in St. George's Hall, Elm Street, on Wednesday evening, the 8th of February, at 8.30 p.m. The President, Dr. F. LeM. Grasett, occupied the chair.

Aneurism of Arch of Aorta.

Dr. R. J. Dwyer reported as follows: Patient, male, aged 56. Had been under observation for sixteen months. Had an attack of jaundice when a boy; and eighteen years ago had become inoculated with the virus of syphilis, for which he had only been treated at that time a period of three or four months. Had been a heavy drinker also, but for the last two years temperate. Two years ago the patient was a very muscular man, weight being about 230 pounds. It is now 190 pounds. Patient a peripatetic vendor of goods, probably often carrying his pack on his back. First noticed pains under left scapula. Some slight cyanosis. Respirations, 34, slightly labored. Pulsation in right parasternal line, most distinct in second space. Dulness more marked to the right of the sternum than to left. Systolic murmur heard over the apex and another of same variety, most distinct in the second right space, near to the sternum. The aortic second sound is also much accentuated. The patient complains very much of pain radiating from angle of left scapula, around the left side. Voice somewhat husky. The aneurism diagnosed to be situated in ascending and transverse portions of arch. Impulse of aorta easily felt in supra-sternal notch. Dr. Dwyer considered the condition to be a dilatation of first and second portions of the arch.

The Fellows present examined the patient presented by Dr. Dwyer, after which an interesting discussion of the case was participated in by Drs. Fenton, Anderson, Chas. Temple, Grasett, Rudolf, Primrose and Bingham.

Acute Exophthalmos.

Dr. Fenton read comprehensive notes of this case, which occurred recently in his private practice. Married woman, aged 23; primipara. Never strong, but never had any serious illness. The thyroid gland had always been very prominent. The mother of patient had also had enlarged thyroid, as also an aunt. Grandfather, an uncle and a sister died of phthisis. Patient was confined in September last, being delivered with forceps. After delivery, pulse 110, ascribed to anemia. Bleeding continued free for a couple of days, in spite of ergot and strychnia. There was no pain or marked tenderness anywhere.

Patient dozed considerably during the day, but extremely wakeful during the night. Ten days after delivery the doctor was hurriedly summoned to her bedside. Found patient very hysterical, with some headache, epistaxis and a tympanitic condition of abdomen. Thirst very troublesome. The gland measured $4 \times 1\frac{1}{2}$ inches. Pulse, high tension and marked accentuation of second sound. Eyes prominent; Von Graefe's sign absent. Marked muscular tremors. No pulsation of thyroid gland to be felt, nor any murmur heard on auscultation over it. Urine, natural. The swelling was almost confined to right lobe. Patient on the tenth day, highly erotic. Treated with digitalis, twelve-minim doses. The gland can now be scarcely noticed. She was apparently well two or three weeks before parturition, although the nurse had noticed the prominence of the eyes before delivery. Dr. Fenton considered the case an interesting one from the probability of its acute onset.

Drs. W. J. McCollum and Chas. Temple reported similar cases seen in practice. The case was further discussed by Drs. Dwyer, Ross, Trow and the President, the latter complimenting Dr. Fenton upon the acuteness of his observations.

Clinical Notes of Cases of Cholelithiasis.

Before presenting these notes to the Society, Dr. Ross reiterated a statement he had made at the Toronto Medical Society that anyone who had sudden severe pain coming on, accompanied by vomiting and tenderness on pressure, with rigidity of the right rectus muscle, was a subject for celiotomy.

CASE 1.—A doctor aged 62, who had been in good health for some time past. A few years ago patient had typhoid fever and nearly lost his life. In the present attack there was slight elevation of temperature and some acceleration of pulse. Two days before operation had complained of sudden severe pain in the abdomen. There was no vomiting, but tendency to vomit. No rigidity of the muscle in this case. Exploratory incision was decided on after consultation, as appendiceal trouble was suspected. The abdomen was opened in the right rectus muscle, but no disease of appendix found. Examination upwards ascertained that the omentum was adherent to the intestines and gall-bladder. The gall-bladder was black and gangrenous, and quite ready to burst. Four large gall-stones were removed, one of which was acting as a ball valve. The patient made an uninterrupted recovery.

CASE 2.—Gall-stones in gall-bladder simulating stone in the kidney. Pains on right side with painful micturition. The temperature and pulse elevated. A tumor was found in the right lumbar region, and slight dullness in the loin. The abdomen was opened to right of right rectus muscle. The tumor proved to be a large suppurating gall-bladder matted

down and quite adherent. Patient made a good recovery. This case shows that it is almost impossible to diagnose suppurating gall-bladder and floating kidney, even after the abdomen has been opened.

CASE 3.—Obstruction of common bile duct in a man aged 60. He had been a sufferer for twenty-five years. Jaundice two years ago—thought it was cancer. Murphy button used and it has not yet appeared. Patient now enjoys perfect health. No growth can give symptoms extending over twenty-five years. Anastomosis with the colon will give a perfect result. It is not necessary to convey the bile into the small intestine.

CASE 4.—One of extended gall-bladder in a woman aged 52. This was an obscure case. Patient had suffered intense pain. The case was one of gall-stones obstructing cystic duct. Retching was at times almost incessant. Paroxysms of pain, albumen found in the urine. Removed thirty-six stones from the gall-bladder, one in the duct could not be taken out. Patient made an excellent recovery. Dr. Ross spoke of an instrument he had devised and was having prepared in England to facilitate the removal of stones in the duct. He promised to show it to the Society on a future date.

CASE 5.—Man, aged 76. Had suffered two or three years with attacks of pain of indefinite character. The pain was referred to the region of gall-bladder and lower angle of scapula. Jaundice nine months previously. The gall-bladder was found embedded in a mass of adhesions. Thirteen small stones were removed, but one felt in the common duct was left *in situ*. Jaundice has all disappeared, but still has a sinus.

Dr. Ross exhibited the different stones to the Fellows, and spoke about the importance of draining Morrison's pouch in these operations.

Drs. A. A. Macdonald, Grasett and Pepler contributed brief discussions on the cases. Dr. George A. Bingham spoke of the advantage to the Fellows of having heard such interesting and instructing notes, and emphasized the importance of draining Morrison's pouch, as pointed out by Dr. Ross.

Scirrhus Cancer of Breast—Specimen.

Dr. A. A. Macdonald reported case as follows: Patient unmarried, aged 36, menstruated regularly. Never noticed any pain in the breast until three weeks before the specimen was removed. Then after a little pain a small nodule was felt in the breast, about the size of a hen's egg. There were no enlarged glands in the axilla. On removing the growth, the under surface was found to be particularly hard and somewhat puffy, though the nipple was not retracted and no adhesion of the skin. Examined microscopically the growth was pronounced to be cancerous.

GEORGE ELLIOTT, *Rec. Sec'y.*

Editorials.

THE HOSPITALS, THE PUBLIC AND THE MEDICAL PROFESSION.

Hospitals were originally intended for aged helpless people, orphans and the sick poor. Without any reference to homes, poor-houses, etc., we have to note that hospitals for the sick and injured have been greatly improved in character and increased in numbers during the last quarter of a century. The stigma formerly attached to residence in a general hospital during illness has to a large extent vanished. Private and semi-private wards have become very popular, as shown by the fact that, although many private hospitals have been established, and many additions have been made in recent years to the accommodation for private patients in all the general hospitals, latest reports show that more rooms for such purposes are urgently needed.

People who are fairly well-to-do without being wealthy, have discovered that they can get much better care for a limited amount of money in any well-regulated hospital than they can possibly get at home; and, as a consequence, are more inclined than ever before to go or send their friends to such a place for treatment during illness. The comfortable private ward is especially a boon to one who becomes ill in a hotel or boarding house, and this fact is now pretty well recognized in all parts of the civilized world.

In certain cities and towns complaints are made by physicians unattached to hospitals because they are not allowed to attend their own patients after sending them into such institutions. Both physicians and patients often felt that such a rule was not fair. The hospital authorities in some places considered that they could not preserve proper discipline unless all patients were placed under the care of members of the visiting staff, who were to be held responsible for their proper treatment. The governors of all the public hospitals in Toronto have for some years allowed all physicians and surgeons of

good standing to treat their own patients in the private and semi-private wards. This appears to be the fairest thing for all concerned, especially as it prevents anything like a monopoly on the part of those who happen to be on the visiting staffs. So far as we know, this custom, which is by no means an ancient one in some of our hospitals, has proved quite satisfactory in all respects. The patients get the best of care for a reasonable sum, and the attending physicians get the fees which should properly belong to them.

THE QUEEN VS. TAGGART.

This case was tried at the January assizes. At the time it attracted very much attention, and is a case of more than usual interest from the medico-legal standpoint. It is not our intention to go into the personal and family history of the unfortunate man, but rather to offer a few remarks on the course pursued by the Crown in the case.

It was anticipated that the plea of insanity would be raised as a defence for the murder of Mrs. Taggart by Frederick Taggart, her husband, last November. As it is the duty of the Crown to secure justice, as far as possible, and not to strive after a conviction, the authorities very properly appointed medical experts to examine the prisoner. The medical gentlemen commissioned for this purpose were Drs. J. H. Richardson, N. H. Beemer (Medical Superintendent of the Mimico Asylum), A. J. Johnson and Alexander Primrose.

After a most careful examination these four medical gentlemen unanimously decided that the prisoner was a typical instance of delusional insanity, and that his actions had been governed by voices that he had heard telling him to perform the dreadful deed. After this examination the four experts made out a report, which all signed. This report was duly forwarded to the proper Crown officers.

Subsequently to the receipt by the Crown officers of this report, they sent a fifth medical gentleman to examine the prisoner.

The case came to trial at the January assizes. The Crown completed its case, without the slightest reference to the report

of the medical experts who had examined the prisoner. During the defence the counsel of the prisoner made the demand in court to see the report. This was refused by the Crown. Why Mr. J. K. Kerr, the Crown counsel in the case, should have refused to give the prisoner the benefit of the testimony of these experts, it is difficult to understand.

Had the defence not decided to put in the plea of insanity, as a defence for the prisoner's action, we can only guess what course the Crown would have taken. It is only reasonable to assume, however, that no reference would have been made to the medical experts' report, nor would any of them have been called as witnesses. We have no hesitation in stating that, in our opinion, such a course as the above, cannot be too strongly condemned. For the Crown to be fully informed of the prisoner's insanity, and not only make no reference to such information, but refuse to produce it when requested so to do by the defence, seems most remarkable. Perhaps the Crown counsel could explain it.

On the Crown's refusing to produce the report of its own experts, and having made no reference to it, nor having called any of the experts in the submission of the Crown's case to the court, the defence called Drs. Beemer and Richardson, Crown witnesses—in addition to those who appeared for the defence, namely, Drs. Samuel Richardson, J. Ferguson and W. J. Wilson. The defence then stated that if the Crown would put Dr. A. Primrose in the witness stand, the defence had done its whole duty in placing the case before the court.

It is perhaps due to our lack of learning, but it puzzles us to see why the case was dragged through a whole week when it could have been disposed of in a few minutes, and the unfortunate man sent to the asylum, where the jury very properly assigned him "until the pleasure of the Lieut.-Governor be known."

It creates within one a feeling of horror to think that, if the defence had not set up the plea of insanity, the Crown, knowing what it did, would have permitted the unfortunate prisoner to have been judicially murdered.

There was an entire agreement on the part of all the medical gentlemen in the case as to the prisoner's insanity and irresponsibility for the crime. Dr. J. M. Cotton, the Crown's fifth

expert, concurred in this opinion. The medical evidence throughout was peculiarly clear and able, and reflected great credit on the profession of this country. It is to be hoped that it will be a long time before the Crown again adopts such a course, where a man's life hangs in the balance.

THE DEPOPULATION OF FRANCE.

We are so fully possessed of the fact that the French in Canada are exceptionally prolific that we can scarce realize that the French of France are quite the reverse. We learn from an article in the *British Medical Journal* that for every 1,000 married women the annual number of births in France is 115, as compared with 184 in Belgium and Italy, 176 in Switzerland, 186 in Norway, 190 in England and Wales, 202 in Germany, 205 in Scotland, 206 in Prussia, and 216 in Wurtemberg. It seems that the birth-rate has been steadily declining from year to year for some time, and political economists are beginning to take a serious view of the matter.

It is said that if the French population be separated from the foreign population living in France, there has been for several years an excess of deaths over births; and it is feared that in consequence of the decrease of the purely French population in France, that country may before long be reduced to the rank of a second or third rate power. It is said that many of the races of antiquity were entirely killed off by this "disease"—called by Aristotle, oliganthropy.

This condition of things is thought to be due to the voluntary curtailment of the family through artificial measures directed against conception. It is well known that such practices are not confined to France. In many other countries, including England and the United States, the birth-rate is declining from similar causes. The whole story is an old one, and has been widely discussed in all its aspects. Ministers and doctors protest loudly against practices tending to the prevention of conception, but generally in vain.

The *British Medical Journal* concludes its article as follows: "The future of the world's history depends largely on the question as to which races will continue to multiply and to

colonize until the limits of colonization have been reached, when other races have, through the exercise of selfish prudence, ceased to take part in this colonization, and upon the relative excess of births over deaths in the different European countries preceding the stage at which other nations like France may have ceased to any material extent to add to the emigrant population."

THE TIME ELEMENT IN SURGICAL OPERATIONS.

It is recorded of Professor Syme, of Edinburgh, that he did the first amputation at the hip which was done in Great Britain, in the time of one minute, and that although forced by unforeseen circumstances to change his plan after entering the knife. His patient survived in spite of some hemorrhage and the absence of any anesthetic to lessen shock. It is doubtful if many—indeed any—of our present experts in surgery could duplicate Syme's feat, and fortunately, it is not necessary to do so.

One of the great benefits of anesthesia is the freedom of action, within certain limits, conferred upon the operator. Unfortunately there is a strong tendency amongst some surgeons to forget that whilst the anesthetics in use at the present day relieve the patient from pain and free the surgeon's hands to a great extent, they are nevertheless powerful intoxicants, and may exert a highly detrimental influence upon the progress of the case. This is a mild statement, since we all know that a considerable number of patients must, and do, die of the anesthesia alone. But it is not in respect of the anesthesia only that the surgeon's case may suffer. It is beyond dispute amongst reasonable men that prolonged exposure and handling of the organs and tissues of the body subjects the patient to much greater risk of disaster than a shorter exposure and handling does. It seems marvellous, then, that we find men who are good operators in one sense, and who occupy positions of authority as teachers, acting, if not in so many words, formulating, the doctrine that the length of time during which a patient is under an anesthetic and during which his organs and tissues are exposed and handled—mauled in many cases—is of no consequence in determining the result. There can be very few operations in surgery which require two hours for

completion; those calling for a longer period still, must be quite exceptional; yet it is not a rare thing to hear of an even greater period elapsing during which a patient is under chloroform or ether. We have heard of a case, not long since, in which a breast amputation, with cleaning of the axilla, occupied five hours, the patient being under anesthetic all the time, no special difficulty complicating the case. If recovery were not all that could be desired in this case, could the surgeon say that he was not to blame? Surely not. Shock, septicemia, mania from ether or chloroform poisoning, nephritis, pneumonia, may any of them depend in part upon the time of exposure of the patient. Leaving out of sight the interests of the individual operated upon, what reasons can the operator give for slowness of procedure? That there is nothing inherently better in the slow work as compared with the rapid is proven by the results of many of our best men—men such as Kelly, of Baltimore, who not only practises, but preaches speed, and who attributes some measure of his success to his speed. Many others could easily be quoted in support of this position. If any man be weak enough to plead for time, that he may give due consideration to all steps as he proceeds, then he should not be operating. Rapid and sure observation and deduction is a *sine quâ non* for the surgeon.

As to the plea that the length of time that an organism is under the influence of poison, makes no difference in the result, or that the length of time that delicate structures, such as the tissues of the human body, are mishandled, are of no consequence in the subsequent efforts at recovery, probably all sane men will have the same opinion.

DEPARTMENT OF PUBLIC HEALTH.—The Government has done the right thing in establishing a department of Public Health, and has fortunately found the proper man to take charge of it. Dr. F. Montizambert, for many years superintendent of the Grosse Isle quarantine station, and for the past five years General Superintendent of Quarantine, has been appointed Director-General of Public Health, with headquarters at Ottawa. His duties will be to act as sanitary adviser of the Dominion Government, as a General Superintendent of Quarantine, and as inspector of the Tracadie Lazaretto.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. E. GRAHAM, J. FERGUSON, T. McMAHON,
AND H. J. HAMILTON.

Membranous Enteritis.

Dr. Max Einhorn's remarks on this subject (*Medical Record*, January 28th) are worthy of careful attention. He treats his subject under the following headings :

1. *History*.—This is an old disease. It was clearly recognized by Paulus Ægineta, who spoke of the passage of the inner membrane of the intestine.

Morgagne thought that these membranes was mucus, which had become inspissated and thickened in the bowels.

Mason Good describes it under the name of tubular diarrhœa. Woodward employed the same term, but also said that membranous diarrhœa would be a suitable one.

Siredey, in 1869, studied the disease carefully, and came to the conclusion that, as it occurred in persons whose digestive canal revealed no organic disease, the condition was an intestinal neurosis.

Whitehead, in 1871, spoke of the condition as mucous disease. He insisted on a fair amount of exercise, the limitation of food in amount and to easily digested solids, and the avoidance of liquid diet except milk.

Cruveilhier wrote of the affection under the appellation pseudo-membranous enteritis.

Da Costa again, in 1871, gave it the name membranous enteritis. His description is very full, and recognizes its nervous nature.

Leyden, in 1882, called the affection colica mucosa ; and Nothnagel adopted the same name. They regarded it as a disease of the colon, caused by increased secretion of the glandular cells, induced by constipation, with some secondary inflammation of the mucosa, and that secreted masses consisted of mucus.

Ewald and Boas have laid stress on the ptosis and atony of the colon.

2. *Etiology*.—This disease is regarded by most authors as rare. It is met with much more frequently in women than in men. W. Mendelson asserts that neurasthenia was not absent in any of his cases. With this statement nearly all agree.

Hysteria and neurasthenia play a great rôle in the origin of the trouble.

Dr. Einhorn states, that of 772 men and 543 women under his own care, 20 suffered with membranous enteritis. He states that motor function of the stomach was increased in 8, and normal in 4, and that 5 presented typical achylia gastrica. When one considers the infrequency of achylia gastrica, this large percentage in cases of membranous enteritis is worthy of note. Even when typical achylia is absent, some feature of it, such as defective secretion of gastric fluid, is present. It is likely that the nervous conditions present cause both the gastric and the enteritic symptoms.

3. *Symptomatology*.—The disease is characterized by rather sharp attacks of colic in the abdomen, followed by the passage of mucous masses in the stools. The mucus may be alone or mixed with fæces. Usually the attack is preceded by a period of constipation. This is followed by diarrhœa and tenesmus. The gastric symptoms of the attack generally are loss of appetite, belching and burning pain at pit of stomach. There may be vomiting. These attacks last from three to seven days, when the pains subside, the diarrhœa ceases, though the nervous symptoms continue.

The mucous masses have a grayish-white, rarely yellowish, color, and are ribbon-shaped, or membrane-like in appearance. A complete mould of the intestinal canal has been sometimes met with. Cornil and Nothnagel have proven the mucous nature of these masses.

4. *Diagnosis*.—It is necessary to guard against making the mistake of calling shreds of orange pulp, pieces of tendonous tissue, portions of tape-worm, etc., masses of mucus.

It should not be confounded with intestinal catarrh. There are, however, cases of chronic intestinal catarrh, which are complicated with membranous colic, where the typical attacks of mucous colic occur.

5. *Treatment*.—The old authors recognized that fluid diet is unsuitable. Experience confirms this view.

Von Noorden recommends a coarse diet. This gives the intestines more work to do. There is considerable residuum left. He advises half a pound of bread containing a good deal of chaff, leguminous and garden vegetables rich in cellulose, fruits with small pits and coarse skins, as currants, grapes, gooseberries.

This diet should not be introduced too suddenly. Dr. Einhorn advises a nutritious diet, but not too coarse. It should contain a liberal portion of vegetable substances. The great object is to train the patient to master the foods of an ordinary healthy diet. The therapeutics of the disease consist of the

treatment of the attacks and the intervals. The former is managed by rest in bed, enemata, the administration of opium or belladonna, and hot applications. The most important point in the treatment of the interval is the methodical employment of oil enemata. These injections are made into the bowel at night; the quantity is from 250 to 500 cubic centimetres, at blood temperature. The amount may be reduced to 150 or 100 cubic centimetres where it causes a desire to evacuate the bowels. The injection is retained during the night. The oil should be injected every night for three weeks; every other night for three weeks; twice a week for four weeks; and then once a week for four or five months. Good tonics and proper hygiene should not be overlooked. Hydro-therapeutic measures are useful in some cases.

Polymyositis.

Sir W. R. Gowers (*Brit. Med. Jour.*, 14th January) discusses this disease in his usual able manner. This is a rare disease, but it is important because it is so formidable. It has a close relationship to another disease that is common enough—namely, polyneuritis.

In this severe disease, the nerves suffer with the muscles, though it would seem less widely. In the case of polyneuritis it is the peripheral nerves and those in the extremities that are mainly affected. It is also specially a bilateral disease. The motor or the sensory nerves may be mostly involved, but very generally both are implicated. Although a bilateral disease, it is often more severe on one side than on the other.

This bilateral feature is a genuine characteristic of polyneuritis. It brands the disease as a constitutional one. Not only are there structures on each side of the body of nearly equal liability to the disease, but these must be reached through the blood. The poison may be varied, but the channel of conduction common, that is, the vascular system. The power in certain tissues in the body to endure or resist diseases differs. This failure to perform function on both sides of the body and in similar structures may be safely taken to be of toxic origin.

The number of toxic agents is great and their nature most varied. Some are taken from without, as the metallic poisons and alcohol. Many of these poisons are the product of low organisms. The body may produce within itself poisons that are extremely damaging, as the products of various bacteria that are introduced into the system, but we have also the toxic products that arise from deranged metabolism, as in gout. Then again, exposure to cold is capable of causing grave disease and deranging the functions of certain of the glands so as to throw into the system large quantities of virulent toxic

agents. Some change takes place in the chemical action of the organs of the body, and disease of a constitutional and toxic nature results.

In polymyositis there seems to be developed some form of rheumatic poison that affects the muscles in groups on each side of the body. It is met with almost exclusively as the result of exposure to cold. It may be very acute and severe in some cases, and of extreme chronicity in others. The multiple inflammations affect the nerves and muscles, but the latter more widely than the former. At the first the muscles are very tender, and afterwards undergo hardening and contraction, and, in time, may resist all efforts to overcome these conditions.

It is usual to obtain a history of rheumatism or gout in the ancestry. Gout often changes in a subsequent generation into the rheumatic form.

The treatment in the early stage of the disease consists in rest, diaphoretics, salicylates and sometimes small doses of mercury. This controls the inflammation and lessens the tendency later on to contractions and deformities. The advantage of early and effective treatment is multiplied manifold in the advantages yielded in the later stage of the disease. If the early stage of the disease is not properly managed a lifetime of the most distressing invalidism may be imposed upon the person, coupled with severe and incurable deformities.

Antitoxin Treatment of Diphtheria.

Dr. E. W. Goodall, the medical superintendent of the Eastern Fever Hospital of the Metropolitan Asylums Board, has an article in the *Brit. Med. Jour.* for January 28th and February 4th. In these articles he lays before the medical profession much valuable information as to the results obtained by the non-antitoxin and the antitoxin treatment of this disease.

It is now about four years since Roux read his paper on the serum treatment of diphtheria at the Eighth International Congress of Hygiene at Buda-Pesth. Before the date of this paper, some strong evidence had been advanced that the treatment was of undoubted value. But there was an air of suspicion about the practice. But when a person of such high standing as Roux gave the weight of his experience in favor of it, the profession was compelled to give the method an unbiassed trial.

Under the antitoxin treatment, the mortality has been greatly reduced for all ages. This is specially true, when the treatment is commenced at an early period. In the hospital, 180 treated before the introduction of the antitoxin, yielded a death-rate of 46 per cent. Under the antitoxin treatment, 264 yielded a death-rate of 23 per cent. Now it should be borne in

mind that many of these were not admitted until a late period of the disease, when the treatment is by no means so useful. In nearly all the cases admitted, the patients had not been treated by the antitoxin; and in 1896 as many as 74 per cent. were admitted on or after the fourth day of the disease.

With regard to laryngeal diphtheria, the evidence was very strong as to the great value of the antitoxin. Of 3,275 cases treated without the serum, whether operated on or not, the recovery percentage was only thirty-three. On the other hand, of 3,486 treated with the antitoxin and including those operated upon, the recovery percentage was as high as seventy-four.

It is well known that the membrane may extend into the trachea and bronchi. The value of the antitoxin in preventing this extension is beyond doubt. In a record of 131 fatal cases, not treated with the antitoxin, forty-three died of the extension of the membrane, or of broncho-pneumonia. But of 274 fatal cases under the antitoxin treatment only twenty-one died of the extension of the membrane into the trachea or bronchi, or of broncho-pneumonia.

With regard to the post-diphtheritic paralysis, some very important points are revealed by a study of cases under the two methods of treatment. In the first place, those treated without the antitoxin give a paralysis percentage of fourteen. Among those treated with the antitoxin, there was a percentage of eighteen. It must be noted, however, that many mild cases are not treated by the serum method. All the best observers admit that the severe cases are those most liable to be followed by paralysis; and these are the cases in which the serum is most frequently employed. It would appear that cases treated with the antitoxin would average a severer type than those not treated in this way. There is one very important feature that must not be lost sight of. It is that when the antitoxin is used early in the disease the rate of paralysis is greatly reduced; those treated with the serum on the first day give 5 per cent., while those treated on the second day give 10 per cent. This is a good showing as compared with 14 per cent., the result in all non-antitoxin cases. It would therefore appear that the serum treatment, when properly employed, lessens materially the risk of paralysis.

Apart from these valuable statistics, the clinical facts are of much moment. The extension of existing, and the formation of fresh membrane is stopped, and that already formed clears off more rapidly than is the case when the serum has not been used. The foul discharges from the nares, when they are implicated, soon cease. The lessening of the faucial inflammation enables the patient to take food more readily. The swelling of the glands and the cervical tissue subsides. The

pulse-rate and temperature fall, the appetite improves, and the convalescence is more rapid.

The Management of Epilepsy.

Dr. C. H. Hughes (*Alienist and Neurologist* for January, 1899) has a carefully thought-out article upon the above subject. He takes strong ground that he who would successfully treat epilepsy must be a broad clinician and know well the whole range of practical medicine. Epilepsy is a condition of brain, special and peculiar; yet, the paroxysms are set in motion by digestive derangements, by toxins in the blood, either introduced from without or originated within. Epilepsy is often an expression of gout, rheumatism, syphilis and sympathetic irritation. To restore the idiopathic epileptic, the person must be made anew. The epileptic habit and the neuropathic substratum must be corrected. All the hereditary conditions must be searched out and weighed.

The treatment means much more than the postponement of the attacks. It means the curing of the causative conditions, and the rebuilding of the nervous system. Only long-continued suppression of even the vertiginous and *petit mal* attacks give hope of cure. This result cannot be obtained in more than 10 per cent. of all the cases. After a year and a half or two years of careful treatment there may be a lengthy spell of freedom; but even then it is not wise to leave the patient without some daily treatment. The author states that he continues the bromide impression by the daily use of thirty grains of bromide of strontium, alternating with the other bromides from time to time.

The suppression of the epilepsy sometimes brings out a far worse condition. Epileptic automatism, epileptic mania, or insanity may appear, and show only too plainly that the explosive attacks are by no means the whole disease. This epileptic change in the brain must be overcome and altered back to the normal before they may be considered as recovered from their malady. No one remedy will probably do this.

In view of these facts, it is not in accordance with sound pathology or therapeutics to speak of special plans of treatment, as the Codcia, or Bechterew methods. They are only fads, and can do nothing but harm. In all these plans of treatment, where a number of drugs are combined, bromide usually forms the main ingredient.

The combinations of the bromides with cannabis, chloral, codeia, etc., add nothing to our resources, and tend rather to encumber than help. The whole question of neuropathology has passed the period of merely controlling the attacks. What we need is something that will cure the brain change that

displays itself in vaso-motor, or psycho-motor paroxysms. This is coming along the lines of a general knowledge and study of neuropathology, and neurotics in particular.

A good deal of weight should be attached to the toxic theory of the excitation of the attacks. Although gastric, intestinal and toxic conditions do not cause the epileptic predisposition of brain, yet they are causative factors in the epileptic paroxysm.

It is clear that the alternation of the bromides, the blending of them, care and treatment of the digestive canal, and the regulation of the whole organism constitute parts of the treatment of epilepsy. There is certainly very much wrong when the brain goes into coma and starts convulsions. Our success, therefore, must be measured by our ability to arrest the convulsions, the psychic, vertiginous, somnambulistic, automatic and impulsive features of the disease. It will not do to have regard only to the convulsive seizures.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

Independent Third Kidney.

W. Watson Cheyne (*Lancet*, January 28th, 1899) records a case of an independent third kidney found while performing an abdominal section. A well-developed kidney was found on the right side of the lower part of the spinal column just at the brim of the pelvis, having its own ureter and blood supply, and distant from three to four inches from the right kidney, which was felt in the right loin and apparently of normal size. The left kidney was somewhat smaller than the right. In this case the symptoms the patient complained of were no doubt due to the mobility of the kidney and probably to slight pressure on, or kinking of, the ureter. The symptoms were as follows: Indefinite abdominal pain, indigestion, and a general hysterical condition. The only special feature was diminution in the quantity of the urine passed. On examining the patient under an anesthetic an irregular, flattened, tender swelling was readily felt behind the right rectus muscle at the brim of the pelvis. The swelling was slightly movable and had a nodular character. It could not be felt from the pelvis and evidently had no connection with the pelvic organs. As to the exact nature of the swelling no definite opinion was reached. The idea of a movable kidney, which presented itself among other suggestions, was discarded on account of the situation of the tumor and the fact that it could not be pushed into the loin. An exploratory operation was consequently done with the above

result. Mr. Cheyne made no attempt to fix the kidney by stitches as that would have been very difficult, and he hoped that the tearing and disturbance necessary to expose it would lead to such adhesions as would sufficiently fix it in its place.

A Note on Amputation for Charcot's Joint Disease.

Mr. Southam (*Lancet*, November 12th, 1898) gives notes of a case of Charcot's disease affecting the ankle-joint, in which the joint was so completely disorganized that the foot was displaced upwards and outwards, the internal malleolus projecting through an opening in the skin, giving rise to a condition very like an unreduced compound Pott's fracture. Removal of the foot was obviously the proper treatment, but bearing in mind the unsatisfactory results which often follow amputation for perforating ulcer in tabetic subjects, he hesitated in adopting this course, when a short article by Mr. Jonathan Hutchinson attracted his notice. Mr. Hutchinson wrote that he had recently had an opportunity of observing the process of repair after amputation in a state of advanced locomotor ataxy. He did a Teale's amputation in a middle-aged subject, who for ten years had suffered from locomotor ataxy accompanied by perforating ulcer and disease of the bones of the foot and ankle-joint. The result was extremely satisfactory, the patient recovering with a sound stump, which was afterwards fitted with an artificial limb and bore pressure well. Mr. Southam advised the patient, a male, aged 49, to submit to amputation below the knee-joint. Since then he has performed the same operation on three other patients, all males between forty and fifty years of age, for a similar condition, the ankle-joint being affected in one case and the tarsal joints in the other two. In all four patients the result has been most satisfactory, the stumps healing quickly without suppuration, and without any tendency to sloughing of the soft tissues or necrosis of the end of the bone, as might have been expected from the nervous origin of the disease.

Removal of Calculus from Common Bile Duct, 2 inches long and $3\frac{1}{2}$ inches in circumference without suturing Duct.

Mr. Thornton (*Lancet*, October 22nd, 1898) reports a case of the above where the operation was performed by Mr. Bland Sutton. The patient, a male, aged 58, had suffered for the past four years with attacks of pain, vomiting, and slight jaundice. These occurred often at intervals of only a few days, sometimes weeks. Sometimes, after attacks, he passed small gall-stones by the bowel. On examination there was distinct tenderness and a sense of obscure fulness over the region of the gall-bladder.

but deeper than that organ. Although the patient was very thin, no enlargement of the liver or gall-bladder could be detected on palpation or percussion. Mr. Sutton made an incision from the margin of the ribs along the outer margin of the rectus muscle, about three inches in length. There was no enlargement of gall-bladder, but a small stone could be felt in it. The gall-bladder was opened and this was removed. Behind the gall-bladder, underneath the liver, could be felt indistinctly a large resisting body in the situation of the common bile duct. The abdominal wound was enlarged, the liver was pulled up as high as possible, and the pylorus was pulled aside. Strong efforts were made to push the stone, felt in the distended common bile duct, back into the gall-bladder or onwards into the bowel, but, owing to its size, without avail. An incision about an inch and a half long was made in the long diameter of the duct and the stone was easily expressed. It was of the dimensions given above and weighed seven drachms. There was very little bleeding and the incision in the duct was not sutured. A large india rubber drainage tube was put in down to the bottom of the abdominal wound, the gall-bladder was closed and stitched to the parietes, and the abdominal walls were closed by three layers of sutures. There was for the first three days a profuse discharge of bile, at least two or three pints daily. The tube was gradually shortened and it was removed altogether in about seven days. There was no discharge of bile after the third day. He made an uninterrupted recovery.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

On the Relief of Suffering in Labor.

W. E. Fothergill, M.A., B.Sc., M.D., in the January number of the *Medical Brief* has a good paper on this subject. Many useful hints are given, but his remarks on the use of the hot bath are especially valuable. We quote the author, first in regard to the false labor pains:

We all know that in most cases these false pains are caused by overloading of the rectum, and it is surely worth while to take the trouble necessary to afford the patient relief. The first thing to do is to have the rectum well washed out with one, or two, or if necessary, three copious enemata. When the bowel is quite empty, let the patient be put in a hot bath and kept in it for ten to twenty minutes. This has a wonderful effect upon the false pains, but it cannot be done unless

there is a full-sized bath in the house and plenty of hot water to cover the patient when lying down. A good dose of opium in some form is generally necessary, and other sedatives, such as the bromides, may, with advantage, be combined with it at the discretion of the physician. In bad cases there is nothing like an abdominal application of mustard.

I have alluded to the use of the hot bath in the treatment of false labor pains. It is equally useful during the early stage of true labor. Hyperemia of all the abdominal and pelvic organs exists at this time; the circulation is disturbed, the ligaments of all the pelvic articulations are being stretched and relaxed. All this produces discomfort of more kinds than one, which has to be added to the actual pain of uterine contraction in estimating the suffering of early labor. This discomfort is immensely relieved by immersion of the patient in hot water.

In helping the uterus to dilate the cervix, hot baths, friction over the abdomen, changes in posture, and, sometimes, the application of the binder, are useful.

The Topical Use of Quinine in Leucorrhœa.

Dr. Hardwicke (*Lancet*, January 7th, 1899) speaks as follows about the topical application of quinine to the mucous membrane of the cervix uteri and vagina in cases of leucorrhœa: A patient, the mother of six children, who had been a sufferer from the above complaint for some years, having used the various remedies usually prescribed in such cases but with only temporary benefit, her trouble sooner or later recurring, adopted the use, from prudential motives, of what proved to be quinine pessaries. Since using them not only had her leucorrhœa disappeared but her general health had improved. I have since used quinine topically in several cases of simple leucorrhœa always with great success—in fact, I do not know of a single instance in which it has failed or in which quinism has been produced. It may be used in the form of douche or pessary. I adopt the latter form as being obviously the better one; the drug has a better chance of closer and more continuous contact with the congested membrane. I prescribe three grains of the hydrobromate in a half-drachm pessary in combination with oleum theobromatis, but the pessus quiniæ of the "Extra Pharmacopeia" containing the hydrochloride answers just as well. One insertion a day is generally sufficient.

Post-Partum Hemorrhage Treated by Rectal Injection.

F. de Jersey, M.B., Ch.B. (*Lancet*, December 17th, p. 1628), was called to a woman 1½ hours after the birth of her thirteenth child. She was utterly collapsed and blanched, and the pulse

was imperceptible. The placenta had not come away. Two pints of hot saline solution were injected into the rectum. In a few minutes the pulse returned. The placenta was removed under chloroform anesthesia.

We have published another article on the value of saline injections in severe hemorrhages and in puerperal convulsions. Intravenous or subcutaneous injection is usually recommended. But it has always seemed to us that for the emergencies of general practice rectal injection was far the best method. No special instruments are required. The theoretical advantage that intravenous injection acts more rapidly than rectal is more than neutralized by the greater time required in preparing for and performing the former operation.—*Med. and Surg. Review of Reviews.*

[I have for the last four years been much pleased with the results of the administration of hot saline enemata in cases of severe hemorrhage and puerperal eclampsia, and have often wondered why so many surgeons apparently ignore this simple, safe, and generally satisfactory procedure, and prefer the very serious operation of intra-venous injection. My rule is to commence with the saline enemata; if they fail, I try subcutaneous injections; last of all, in desperate cases where the other methods have failed I recommend the intra-venous injections.—A. H. W.]

A New Device for the Arrest of Post-Partum Hemorrhage.

Arndt (*Münchener Med. Wochenschrift*, No. 43, 1898, p. 1390) proposes a new treatment for atonic uterine hemorrhage. Though deaths from post-partum flooding are not so common as formerly, now that the manual expression of the placenta has been limited to suitable cases, Dührssen's statement that in Prussia alone there is probably one death a day from this cause, shows the need of a reliable method of treatment. Dührssen's tamponade is valuable, but is not without danger.

Arndt's treatment consists in seizing the flaccid lips of the os with one or two bullet-forceps, and forcibly but slowly drawing the uterus downwards as far as possible. This is repeated three or four times, until all hemorrhage has ceased and the uterus is firmly contracted.

This mechanical device acts, firstly, by rendering the uterus anemic. This has long been known to operating gynecologists. Winter, Hegar, and others have proved that pan-hysterectomy, of even the gravid uterus, for cancer can be performed without danger from hemorrhage if this precaution is taken. Secondly, it not only arrests bleeding at once, but stimulates the uterus to contract, and prevents its further relaxation; partly by the irritation of the automatic ganglia in the middle layer of the

uterus, and by stretching the uterine nerves in the broad ligaments, partly because anemia of the uterus is one of the strongest stimuli to contraction.

The great advantages of the method are its certainty, simplicity, and—with the most elementary precautions—avoidance of sepsis.—*Med. and Surg. Review of Reviews.*

Orthoform and New Orthoform.

Klaussner (*Münchener med. Wochenschrift*, October 18th, 1898) draws attention to a new modification of orthoform ("Orthoform neu") introduced by Einhorn and Heinz. The new orthoform has the same action as the original, but presents the following advantages over it: (1) The powder is more homogeneous, whiter in color, and does not cohere into lumps to such an extent. (2) It is considerably cheaper, and since its action is manifested in a 10 to 20 per cent. mixture with starch or other powder, its price is no longer prohibitive.

Orthoform, though introduced so recently as August, 1897, has proved serviceable in a great variety of painful affections, both external and internal, through the local anesthesia which it produces whenever the nerve endings are exposed. Neumayer and others have found that, insufflated in tuberculous laryngitis, accompanied by severe pain, it causes anesthesia for 18 to 36 hours, allowing solid food to be taken with comfort, and thus improving the general health. Other clinicians have employed it in painful gastric affections in doses of 15 grains, and have found that, while it relieves the pain of gastric ulcer, simple or malignant, with certainty for some hours, it has no action if there is no solution of continuity. On this account it is a very valuable aid to diagnosis in these cases. Good results have been obtained in skin affections such as prurigo or herpes zoster. A 5 per cent. ointment relieves the pain of corneal ulcer. It has also been reported on very favorably by dentists, as relieving the pain accompanying exposed pulp or excavation of carious teeth, and by gynecologists as a local anesthetic for curetting or plugging the uterus. Surgeons have praised it as an application to anal fissure, malignant ulcers and bed-sores. Hirschbruch uses it in a 3 per cent. emulsion instead of cocaine for infiltration anesthesia, and Lob adds it to injections of mercury in syphilis. Orthoform has the great advantage over cocaine of being absolutely non-poisonous.—*Med. and Surg. Review of Reviews.*

Treatment of Fissure of the Nipple.

Maygrier and Blondel (*Bull. et Mém. de la Soc. Obs. et Gyn. de Paris*, November 10th, 1898) report favorably on the use of orthoform for cracked nipples. It belongs to the same chemical

family as cocaine, which was tried for the same thing by Her-gott. Cocaine has the drawbacks, first, of being apt to produce toxic effects; secondly, of exerting a tendency to suppression of the milk secretion. Indeed, one of the authors has used it for this purpose. Orthoform is a powerful local anesthetic, whose action is more enduring than that of cocaine, lasting on an average twelve hours. It has no effect, however, when applied to the unbroken skin; and it must be kept continuously applied to the wounded surface. A slight burning sensation is felt for a few seconds when first applied. Orthoform has the further advantage of being antiseptic, so that it does not require sterilizing before use. It produces a marked effect in hastening the cicatrization of the fissures. The authors tried it in forty cases; all, without exception, experienced a more or less marked relief. They employed it in three forms: the powder with a moist dressing, the powder with a dry dressing, and a saturated alcoholic solution. For the first the powder is applied to the fissure and sterilized gauze is placed over it and covered with a piece of protective. For nursing the dressing is removed and the breast wiped with a sterilized compress; when the nursing is finished the whole dressing is put back. The second plan consisted simply in the substitution of dry compresses for the wet. The third plan is to apply a few drops of a saturated solution of orthoform in 80 per cent. alcohol; a dry compress is then placed over it. They found the last plan the best; the analgesia is effected much more quickly, the burning sensation is less and of shorter duration, and to the beneficial action of the orthoform is added that of the alcohol. Cicatrization was generally complete in four to five days, without any interference with suckling; by other methods cicatrization takes ten to twelve days even when nursing is suspended.—*Epitome Brit. Med. Jour.*

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, H. B. ANDERSON AND J. AMYOT.

Neusser's Perinuclear, Basophilic Granules in the Blood.

Simon (*Amer. Jour. Med. Sciences*, February, 1899) discusses the presence of Neusser's granules in the blood and their relation to the elimination of uric acid and xanthin bodies in the urine. These granules, originally described by Neusser, in 1894, have a marked affinity for basic dyes, and in blood preparations stained with a modification of Ehrlich's tri-acid formula are seen as small, irregularly-sized, greenish-black or black granules located in immediate contact with the nuclei of the leukocytes. Neusser affirmed that the presence of these

granules was indicative of the uric-acid diathesis in its widest sense, including gout, lithiasis, muscular rheumatism, leukemia, Hodgkin's disease, neuralgia, neurasthenia, diabetes, gastrointestinal derangements and nervous asthma. He also held that the presence of the granules in the blood of tuberculous subjects was of favorable prognostic import.

Simon suggests the following questions: "1. Are Neusser's granules found in the blood under normal conditions? 2. In diseased conditions, are these granules confined to the blood of patients suffering from the uric acid diathesis? 3. Does a constant relation exist between the presence of these granules in the blood and the elimination of uric acid, xanthin bodies, or both? 4. Is the presence of the granules of any prognostic import in tuberculous subjects?"

From a carefully conducted series of examinations, in which the urine of each subject was examined quantitatively for uric acid and xanthin bodies, on the same day that the blood was taken, Simon comes to the following conclusions in answer to these questions: 1. That the granules are present (in varying numbers) in the blood of all healthy subjects, and their absence in a supposedly healthy individual may be regarded as presumptive evidence of some morbid process. 2. That in diseased conditions the granules are not more marked in the blood of those suffering from the uric acid diathesis than in that of those suffering from other diseases. 3. That a constant relation between the presence of the granules and the elimination of uric acid and xanthin bodies in the urine does not exist. 4. That the presence of the granules in tuberculous subjects is not of favorable or unfavorable prognostic import.

Gonorrheal Septicemia and Ulcerative Endocarditis.

In a highly interesting paper, in the *Jour. of Experimental Medicine*, January, 1899, Thayer and Lozear record a case of the above, occurring in the Johns Hopkins Hospital, and in which, fortunately, they were able to demonstrate the character of the disease—so far as its cause was concerned—by means of cultures from the blood during life, and from exudates and blood after death. This case of Thayer and Lozear is perhaps the only one in which the proof of the gonococcal origin of a septicemia and, finally, of an ulcerative endocarditis as the terminal accident of the septicemia, is quite beyond cavil. Thayer and Blumer had already put a case upon record in which the proof is, to most readers, conclusive enough, but Fränkel takes exception. None can be taken in this second case. "Clinically the case presented the features of a grave, acute nephritis with anemia, anasarca, ascites, and finally uremic coma." The anatomical diagnosis (p.m., made by Pro-

fessor Flexner) was "gonococcal septicemia; subacute gonorrhea; subacute vegetative and ulcerative tricuspid endocarditis, caused by the gonococcus; subacute splenic tumor; chronic passive congestion of liver; subacute hemorrhagic and glomerular nephritis; acute sero-purulent pleurisy and pericarditis, caused by gonococcus; pulmonary infarct."

Summary of conclusions, based upon the study of thirty-two cases:

1. An acute gonorrheal urethritis may be the starting point for a grave general septicemia, with all its possible complications.

2. These infections may be mixed or secondary, due to the entrance into the circulation of organisms other than the gonococcus, or they may be purely gonococcal in nature.

3. Endocarditis is an occasional complication of gonorrhea.

4. This endocarditis may be transient, disappearing with but few apparent results, or it may leave the patient with a chronic valvular lesion, or it may pursue a rapidly fatal course with the symptoms of acute ulcerative endocarditis.

5. The endocarditis associated with gonorrhea is commonly due to the direct action of the gonococcus, but may be the result of a secondary or mixed infection.

6. Pericarditis may also occur as a complication of gonorrhea, but is less frequent than endocarditis. It may, as in the case of the latter, be the result of a pure gonococcal or of a mixed infection.

7. Grave myocardial changes, necroses, purulent infiltration, embolic abscesses are common in severe gonococcal septicemia.

8. In instances of gonococcal septicemia the diagnosis may, in some cases, be made during life by cultures taken from the circulating blood according to proper methods.

The Bacteriology of Noma of the Vulva.

Freymuth and Petruschky (*Deut. med. Woch.*) report a case in a child aged three years, in which the diphtheria bacillus was found, and which was treated with the serum. The child was admitted on February 2nd with recent measles. There was much hoarseness and considerable dyspnea. On February 5th an extensive noma was observed in the external genitals. Cultivation experiments revealed, besides other microbes, one exactly resembling the diphtheria bacillus. The dysphagia, along with the laryngitis, rhinitis, and noma, suggested a mixed infection of measles and diphtheria, and therefore anti-diphtheritic serum was injected. The child gradually improved, the slough separating from the vulva. It received in all 6,000 immunity units, and made a good recovery. Freymuth states that previous researches have shown noma to be due to various

microbes. In the above case it was due to the diphtheria bacillus. Later in the disease exudation was observed on the uvula and palate. Noma was thus successfully treated with antitoxin. Freymuth thinks that if a bacteriological examination is made, the number of cases due to the diphtheria bacillus will be found considerable.—*Med. Age*, January 25th, 1899.

Sarcoma of Vagina.

Morris (*Practitioner*, December, 1898) reports a very interesting case of sarcoma of the vagina. The patient, a woman of twenty years of age, had been married eight months, and was six months pregnant. The growth which obstructed the outlet, was removed, and proved on microscopic examination to be a mixed cell sarcoma. There has been no recurrence after two and a half years. The rarity of the growth is shown by the small number (fifty) of which Morris could find record. The facts of its complicating pregnancy and not having recurred add to the interest.

Heart Disease in Fetus and Children.

E. A. Sanson (London *Lancet*, December 10th, 1898) speaks of endocarditis in the fetus as being right-sided. He recalls the case recorded by Constantin Paul in 1880, of a girl of seventeen years of age, who was admitted to the hospital of La Pitié in Paris for accouchement, being in the last month of pregnancy, and examination of whose womb by auscultation revealed highly abnormal fetal heart sound. The first sound of the "tic-tac" was replaced by a harsh murmur. The infant was born in a moribund condition, and *post-mortem* examination showed the right chambers of the heart to be hypertrophied and dilated, whilst the left side was normal. The tricuspid valves showed endocarditis, both sclerous and vegetative. In thirty *post-mortem* examinations of children having organic heart trouble, Sanson found vegetations on the tricuspid in six cases. The heart lesions in rheumatism bear no relation in time or degree to the articular symptoms.

Phosphorus Necrosis and Tuberculosis.

In the *Brit. Med. Jour.* of January 7th, 1899, Stockman gives the result of his investigations in phosphorus necrosis cases amongst match-makers, and concludes that tubercular infection is really at the bottom of the mischief in the jaw. The disease begins, he says, in a carious tooth or the cavity left by tooth extraction. In rapid cases the gum swells, becomes red and tense, and finally an abscess containing fetid pus forms. Necrosis of the soft tissues is followed by bone necrosis, result of chronic periostitis and osteitis. Examination of the pus in

six cases showed the bacillus tuberculosis in all. When death occurs it is generally from pulmonary tuberculosis. The action of the phosphorus is a preparatory one, causing a lesion of the tissues in which Koch's bacillus can lodge and grow.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Cyclic Vomiting.

H.B. Whitney, M.D. (*Archives of Pediatrics*, November, 1898).

Edward G., aged 8½ years, was noticed by his parents on June 21st to be developing certain symptoms which had been known by past experience to be precursors of gastric disturbance. The symptoms were pallor, darkness under the eyes, restless sleep, coated tongue and heavy breath. They had kept him in bed on a limited fluid diet for twenty-four hours.

The writer saw the boy on the 22nd. He gives the following description of the boy at that time: Fairly nourished but delicate-looking. Pulse, 120; temperature, 101°; respiration, normal; tongue moderately coated and breath offensive; abdomen moderately retracted, but no tenderness. At the base of the heart over the pulmonic area was a slight systolic souffle. On the 24th and 26th this souffle had disappeared, and the writer had no reason to suspect any organic lesion.

On the 23rd, although nothing had been taken by the mouth for over thirty-six hours excepting a little calomel and teaspoonful doses of cold water, the boy began to vomit, and continued it for twelve hours. The vomit was some watery mucus, and once contained shreds of clotted blood.

On the 25th, without any medication, the condition much improved, so much so that on the 26th milk was being given at the rate of three pints in twenty-four hours.

This attack would be of little importance in itself were it not that at strikingly uniform intervals similar attacks had occurred. The first attack was on September 14th, 1896, and came without known cause and was very severe. The vomiting lasted five days and was followed by extreme exhaustion. The pulse at one time reached 190, and was irregular. Following this attack were others on December 23rd, 1896; March 20th, 1897; May 20th, 1897; August 18th, 1897, and November 18th, 1897.

The writer thinks that the disease is a gastric neurosis, rather than a gastritis, and under the head of etiology suggestively refers to the numerous poisonous bodies found by Rachford in the urine of persons suffering from such crises as migraine and periodic vomiting.

Book Reviews.

Self-Examination for Medical Students. Three thousand questions on Medical Subjects arranged for Self-Examination. Second edition enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1899.

This little book is published for students. The questions refer to both primary and final subjects. For instance, in surgery, we find: What is the cause of inflammation? 9-20. Describe the varieties of inflammation. 9-19. How does inflammation terminate? 9-19, 31, etc. The figure 9 refers to a book of reference — Horwitz's "Quiz-Compend on Surgery, Minor Surgery and Bandaging," while 20, 19, etc., refers to page. That is to say, on page 20 of a certain quiz-compend you get the answer to the first question. The price of this book is only ten cents, but it is not of much use without the set of fourteen quiz-compends published by the Blakiston Company.

The American Year-Book of Medicine and Surgery. Being a yearly digest of scientific progress and authoritative opinion in all the branches of medicine and surgery, drawn from journals, newspapers and text-books by the leading American and foreign authors and investigators, under the general editorial charge of GEORGE M. GOULD, M.D. Illustrated. W. B. Saunders, 923 Walnut Street, Philadelphia. J. A. Carveth & Co., Toronto.

This is an admirable work in all respects. The different contributors, all of whom are well-known authorities in their various departments, have done their work well, and have furnished a fair epitome of the medical and surgical literature of the year. We believe that no better work of the kind has ever been published. We desire to congratulate the able Editor-in-Chief, Dr. George M. Gould, on the great success that he has achieved. The work will be highly appreciated by the general practitioner.

Clinical Report of the Rotunda Hospitals for one Year. By R. DANCER PUREFOY, M.D., Master; T. HENRY WILSON, HENRY JELLETT, R. P. R. LYLE, Assistant Masters. Printed by John Falconer, 53 Upper Sackville Street, Dublin.

The Dublin School of Obstetricians has for more than half a century been recognized by the medical world as one of the

best that has ever existed. It has been eminently safe and conservative, yet ever practical and progressive. In this report we get interesting details of the methods adopted in Rotunda in various emergencies as well as in ordinary routine work. The Rotunda Hospital is the largest lying-in hospital in Great Britain, and consists of two distinct hospitals, in one of which about 1,800 labor cases are admitted in each year, while in the other about 500 patients suffering from diseases peculiar to women are treated in each year. The medical report of the hospital for the past two years can be obtained post free on application to the Master, Dr. R. D. Purefoy, Rotunda Hospital, Dublin, Ireland.

A Text-Book of Mechano-Therapy. By AXEL V. GRAFSTROM, B.Sc., M.D., late Lieutenant in the Royal Swedish Army; late House Physician, City Hospital, Blackwell's Island, New York. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Price \$1.00.

This is a small manual in which the author treats of massage and medical gymnastics in a clear and concise manner. The first six chapters are devoted to a description of the movements used and to general massage. They are appropriately illustrated in such a way as to materially help the student or nurse wishing to acquire the art. The system used by the Royal Gymnastic Central Institute of Stockholm, Sweden, has been followed largely, with some modifications suggested by eminent authorities on the subject. The remaining chapters deal with the application of the system to special diseases giving the proper movements for several classes of cases such as diseases of the respiratory organs, urinary organs, cardiac diseases, rheumatism and gout, constipation, diseases of the nervous system, diseases of children, and also gives a short review of mechano-therapy in connection with obstetrics. It is a book well worthy of a careful perusal.

The International Medical Annual for 1899. New York: E. B. Treat & Co., 241 West 23rd Street.

The seventeenth issue will soon be ready, and from the advance announcements we predict a book superior to its predecessors. Among the special articles will be found the following: "Practical X-Ray Work," by R. Norris Wolfenden, M.D., B.A.; "Advances in Skull Surgery," by Seneca D. Powell, M.D.; "Surgical Treatment of Paralysis," by Drs. Robert Jones, F.R.C.S., and A. H. Tubby, M.S., M.B. These articles will be freely illustrated, chiefly by reproductions from photographs. "Climatic Treatment of Consumption," by F. de Havilland Hall,

M.D., F.R.C.P. An article on "Legal Decisions Affecting Medical Men," by William A. Purrington, A.B., LL.M., will be found interesting and pertinent. In response to the request of many of the subscribers there will be found an article on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examination, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of finely colored plates.

ANNOUNCEMENT.—J. B. Lippincott Co., Philadelphia, in the ninth annual announcement of *International Clinics* give notice that the price of this well-known quarterly, on and after the April, 1899, issue, will be, for cloth binding, \$2.25, and half leather, \$2.50 per volume, the annual subscription being thereby reduced from \$12.00 and \$13.00 for the respective bindings, to \$9.00 and \$10.00. New or renewal subscribers in Canada may address their orders to Charles Roberts, 593A Cadieux Street, Montreal.

Personals.

Dr. Harley Smith has removed to 190 Spadina Avenue.

Dr. Wm. Goldie has commenced practice at 56 College Street, Toronto.

Dr. J. H. Lowe, of the Montague Private Hospital, has gone to England.

Dr. A. R. Gordon will remove to Bloor and Huron streets on March 1st.

Dr. Edward H. Horsey, of Shanghai, China, is spending a few weeks in Toronto.

Dr. R. Rowan, of Stouffville, has removed to Toronto and located at 301 Dundas Street.

Dr. John Malloch, Toronto General Hospital house staff, 1897, has located on College Street.

Dr. S. H. Westman has returned after a year in the Woman's Hospital, New York, and located on Spadina Avenue.

Dr. Charles Carter, Trinity, '96, has located in Grand Valley, Ont., having purchased the good-will, fixtures and instruments from the estate of the late Dr. Gavillier.

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Dr. George R. McDonagh, of Toronto, reached Gibraltar, February 5th, and the next day went on to Naples.

Dr. W. P. Caven, of Toronto, went to Old Point Comfort, February 21st, and expected to remain about a fortnight.

It is said that Dr. Thos. Roddick, M.P., of Montreal, is tired of politics and will resign at the end of the present term.

Dr. G. Sterling Ryerson left Toronto, February 9th, for Atlantic City, N.J., where he expected to spend a brief holiday.

Professor Wm. Osler, of Baltimore, will deliver the Cavenish lecture for 1899 before the West London Medico-Chirurgical Society.

Dr. F. Montizambert, Medical Director of the Public Health Department at Ottawa, came to Toronto, February 21st, and remained a week.

Dr. Ryerson has been appointed an associate-editor of the *Annals of Ophthalmology*, with the charge of the department of the British Colonies, including India.

Dr. Wm. Graham, who practised in Brussels for many years, and recently in Toronto for a short time, is now located in Clinton in place of Dr. James L. Turnbull.

Dr. Jas. E. Graham, of Toronto, had a slight illness from bronchitis, following la grippe, in Baltimore, but was only confined to his room for a few days. He left Baltimore for Florida, February 8th.

Dr. George S. Wattam, who has been practising in Minnesota since he graduated in 1884, paid a visit to his relatives in Picton. On his return journey he remained a few days in Toronto.

Dr. James L. Turnbull, formerly of Clinton, passed through Toronto, February 17th, on his way to Europe, where he expects to remain about a year. He will go first to Berlin, where he will remain a few months.

The following physicians of Toronto attended the funeral of the late Dr. Mullin, of Hamilton, February 24th: Drs. Rosebrugh, Reeve, O'Reilly, Wright, Ross, Grasett, Cameron, McPhedran, J. D. Thorburn, McGillivray, and McIlwraith.

Dr. J. Heurner Mullin, who graduated 1897, University of Toronto, was a resident assistant in the Toronto General Hospital for one year. After leaving the hospital in July, 1898, he assisted his father, the late Dr. Mullin, of Hamilton, in his practice. He will continue to practise in the house formerly occupied by his father.



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SCOTT & BOWNE, Toronto

Obituary.

JOHN ALEXANDER MULLIN, M.D.

Canada has lost through the death of Dr. John A. Mullin one of her greatest physicians and one of her best citizens. Dr. Mullin was born in New York City in June, 1835. When he was two years old his family came to Canada and settled in Brant County, Ontario. After completing his preliminary education in the public schools he studied medicine under Dr. Rolph. He took the ordinary course in "Rolph's School of Medicine," and received the degree of M.D. from the University of Victoria College in 1859. After graduating he went to New York, where he remained a short time. He then returned to Canada and located in Toronto; but on receiving the offer of a position in the General Hospital, of Hamilton, he went to that city. After a short residence in the hospital he commenced general practice in Hamilton, and was soon recognized as one of the leading physicians of Ontario.

Apart from his services to his patients Dr. Mullin always took a keen interest in matters pertaining to the general welfare of the profession. He was one of the most prominent members of the Canadian Medical Association, of which he was a past-president, and also of the Ontario Medical Association. In private life he was greatly beloved and highly respected by all who knew him. His friends noticed several months ago that his health was failing. Symptoms of a serious condition in the region of the stomach appeared, and he steadily lost ground until death brought relief from his sufferings. He died Feb. 21st, 1899, aged 64. The funeral, which took place Feb. 24th, was a very large one. All classes of citizens felt that a "great man had fallen," and wished to show respect to his memory by following his remains to their last resting place. We deeply mourn our loss by his death. The profession has few such men as John Alexander Mullin, and none better.

W. H. DUNNINGTON.

W. H. Dunnington, a third-year medical student at the University of Toronto, died very suddenly, February 27th, 1899, at the General Hospital, from acute appendicitis, after an illness of two days. Deceased was about thirty years old, and was immensely popular among his college mates and friends generally. He was vice-president of the University Medical Society, and previous to his career as a medical student he lived in Victoria, British Columbia. During the last few months he lived with his mother and two sisters in Toronto. The members of the Medical Faculty, and the students in a body, followed the remains to the Union Station on the morning of March 1st. The funeral took place in Owen Sound on the same day, a number of the students of his year acting as pall-bearers.

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Strychnine	1.20 Gr.

DOSE—Two drs. in
water or milk after
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Selections.

Splenectomy in Malaria.

Laccetti (*Giorn. Internaz. delle Scienze Med.*) reports a case where he removed an enlarged malarial spleen. Six days later an intermittent fever appeared, which soon yielded to quinine injections. This was probably due to the sporulation of the malarial parasite, which, according to Pes, may remain latent in the blood for months. The patient experienced also violent pains in the long bones, which it is suggested were due to a vicarious action of the bone-marrow. Laccetti states that the simple congested spleens found in chronic malaria are reduced by quinine or vaso-constrictor drugs—such as arsenic, strychnine, ergotine—or electricity; when, however, there is a hypertrophic interstitial splenitis, splenectomy is indicated, especially if the enlarged spleen is painful.—*Med. and Surg. Review of Reviews.*

Boulímia.

On August 27th an inquest was held at Plumstead upon the body of William Ward, aged 84, an army pensioner, who died from asphyxia. At the post-mortem examination three pieces of meat, measuring in all twelve inches in length, were found in the deceased's "throat." Evidence was given that he was always a gluttonous feeder and in the habit of bolting his food. His daughter-in-law said that she used to mince his food, but that even then he would bolt such large spoonfuls that he had to gasp for breath. A verdict was returned of "Accidental death." Instances of ravenous appetite are not uncommon, constituting the condition known as boulimia or bulimy, moreover this craving for food substances is sometimes associated with another condition known as polyphagism, when the sufferer eats pins, string, broken bottles, and other indigestible articles. The *Lancet* for May 5th, 1894, commented upon the death of a man in the London Hospital whose stomach was found after death to be full of a heterogeneous mass of these things. Certain tribes in South America are known as earth-eaters, from the habit they have of filling their stomachs with clay, and the custom of gorging is not uncommon among those who live a precarious life. In 1799 there was a French prisoner in England, by name Charles Domery, one of nine brothers who with their father were all remarkable for voracious appetite. One day he was allowed as much to eat as he liked, and between 4 a.m. and 6 p.m. consumed four pounds of

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raw cow's udder, ten pounds of raw beef, two pounds of candles, and five bottles of porter. The narrator remarks: "It is also to be observed that the day was hot, and not having his usual exercise in the yard, it may be presumed he would otherwise have had a better appetite." We fancy the custom still exists in some parts of the country of having hasty pudding eating matches, and at a certain college in Oxford the following rite obtains, or used to do twenty years ago. On Mid-Lent Sunday the first lesson in the evening is Genesis xliii., which gives an account of Benjamin's mess, which was five times as great as any of the other's. Furmenty was always served in Hall on that evening, and the junior man at each table was considered as Benjamin and served with an enormous helping. If he ate it all he could "sconce"—i.e., fine the whole table in sherry—if he could not he was himself fined. When this custom originated no one knows, but it is probably like so many other old customs, a remnant of paganism with a veneer of Christianity over it.—*Lancet*.

Serum Diagnosis in Pediatrics.

After a short account of the diagnostic experiments of Gruben-Widal, which produced such favorable results in abdominal typhus, Pfaundler (*Deutsche med. Woch.*, No. 41, 1898) quotes his own experiments in similar cases of intestinal complications by systematic examination of the intestinal bacteria by serum tests, to find the cause of this disease. His researches may be attributed to an endeavor to establish the theory (as yet but little discussed) that in above-mentioned cases an etiological meaning may be more readily ascribed to the agglutination of bacterial species taken from the serum of a patient. A succession of about seven hundred separate reactions furnished the following conclusions: (1) That the saprophytic bacterium coli of the healthy intestine does not react upon the serum; (2) that in certain cases of contagious colitis a specific agglutination of bacterium coli develops; (3) that the same reaction appears in many instances in which the bacterium coli does not result from primary intestinal lesions, although it may proceed from certain conditions caused thereby, as peritonitis or cystitis. Positive results of serum reaction have been obtained from intestinal bacteria other than bacterium coli; for this reason the positive result of examination of serum for streptococci is noteworthy. A second phenomenon is the formation of fibre; a third (though noticed in few cases only) is the entire freeing of bacterial bodies, caused by extreme attenuation of the blood-serum. This refers to those mesenteric forms in the stools. This freeing took the form of dependent drops as in Dr. Pfeiffer's experiments on animals.—*Medical Age*.

The Canadian Practitioner and Review.

VOL. XXV.

TORONTO, APRIL, 1899.

NO. 4.

Original Communications.

THE SOLDIER AND THE SURGEON.*

BY SURGEON LT.-COL. G. STERLING RYERSON, D.S.G.

It was with pleasure, not unmixed with fear and trepidation—a fear born of knowledge of my own unworthiness and of the great merits of the lecturers who have preceded me, and, perhaps, of the keen and well-informed critics that I see before me—that I accepted the flattering offer of the committee to address you to-night on the subject of the medical service of the Imperial army and of the Canadian militia.

It may not be out of place to say that my mind has long been directed to military medical affairs, and that I ascribe this fact as being due in no small degree to the influence of a great painting which adorned, and still adorns, the walls of the auditorium of the Faculty of Medicine of Paris. The picture represents a sixteenth century battle-scene. In the distance are groups of men engaged in combat. In the foreground is an operating table, on which is strapped and held by the blood-stained assistants, a powerful man who has just had his leg lopped off by the old circular method. To the right of the picture is a brazier filled with glowing charcoal, in which repose several cautery irons, one of which is being handed to the king, who offers it to the surgeon, Paré. Beneath the picture in letters of gold runs the legend, "The King aids their efforts and rewards their zeal." Gazing upon this painting day after day as I followed the lectures, the idea came to me that I would like to become an army doctor. It was not my fate to enter the service of the Imperial army, but I made

* A paper read before Canadian Military Institute, March 6th, 1899.

what haste I could to enter the militia medical service of my native country, on my return to Canada, on the completion of my education abroad.

Military surgery has kept pace with the scientific advance of the century, and the field surgery of to-day differs as greatly from the septic scenes of horror of the sixteenth century as the telegraph does from pony express.

During the bloody civil war in the time of King Charles I. some attempt was made to organize the English medical service; for we read of regimental mates, hospital mates, regimental surgeon, surgeon to a general hospital and surgeon-general, as being recognized ranks in the army of that unhappy monarch. But it was during the wars of Marlborough that the British army medical service took form and increased efficiency. Previous to that time soldiers who were so seriously maimed as to be rendered ineffective were simply discharged, the State believing that it was cheaper to hire whole men than to restore the sick and the maimed to health. It declined to be held responsible for those who suffered in its service, and let them shift for themselves as best they could. The morality of the proceeding did not seem to enter into the question. There was no clear distinction between the land and sea service, though there was between physicians and surgeons, and it was no uncommon thing to hold double commissions, combatant and non-combatant, the holders serving in either capacity as suited their interests or convenience. The services were separated in 1796. In Marlborough's time it was considered effeminate to be sick, and there are lusty yokels who hold that view still, but the bloody and exhaustive battles of the time, and especially in the low countries, where malaria stalked its prey unchecked brought the strongest to a sense of their fallibility.

As in all stressful periods of British history there arises the man for the emergency, so at this trying period, Marlborough's principal medical officer, Sir John Pringle, proved himself an able administrator, a man of courage, of indomitable energy, with the service of his country and the honor of his profession ever uppermost in his mind. Under circumstances of the greatest difficulty and under every disadvantage, he rose to the needs of the occasion and organized a system of regimental, field, and general hospitals. The first general hospital was opened at Ath, May 11th, 1745, and, after the battle of Fontenoy, cared for 600 wounded. It was not, however, until many years later, during the Peninsular war, that surgeons were first assigned to regiments in the field. Sir J. McGrigor, the P. M. O. under Wellington, a man of energy and ability, devised the regimental system of medical officers which has held sway until recently in the Imperial army, and which holds

good to-day in Canada. That the medical officers were active and efficient will be admitted when it is stated that in ten months from the siege of Burgos up to the battle of Vittoria, the total number of sick and wounded admitted to hospital was 95,348; yet on the eve of the battle there were only 5,000 sick in hospital, the vast majority of the 95,000 having returned to duty.

In 1812 a corps called the Royal Waggon Corps was organized, special waggons with springs being constructed for the conveyance of sick and wounded. This corps was disbanded in 1833.

In 1854, on the outbreak of the Crimean war, the Hospital Conveyance Corps was called into existence. That it was not a success was chiefly owing to the total want of special training of the men for their duties, and because the medical officers had no authority over the men.

It was followed by the Land Transport Corps. This corps also came to grief because there was no cohesion or organization which would work, and because it fulfilled but one function required of it, viz., the conveyance of the wounded. The important duties of attending to wounded on the field and in hospital were not provided for. In consequence of all these failures the first Medical Staff Corps was organized in 1855. It consisted of nine companies of seventy-eight men each, "to be employed in any way that may be required in the performance of hospital duties." There were scarcely any military features in this corps, and it also collapsed in about three months. The chief cause of failure was the doubtful and anomalous relations of the medical officers to the combatant authorities. The medical officer had no military authority, hence no power of enforcing discipline.

On September 15th of the same year, this corps gave place to the Army Hospital Corps, which possessed full military organization. The ranks were chiefly recruited by transfer from the combatant ranks of men of good character. Each man spent three months on probation in a military hospital before being finally enrolled in the corps. It was under the command of captains and lieutenants, of orderlies and quartermasters.

In 1858 a Royal Commission, under the presidency of Right Hon. Sidney Herbert, brought in a report which remodelled the department and established the army medical school.

In 1873 Mr. Cardwell, Secretary of State for War, the author of so many army reforms, abolished the regimental system by Royal Warrant and placed all medical officers on a staff. Regimental hospitals disappeared under this warrant, and became part of station or general hospitals, as the case might be.

In 1877 medical officers were given authority over the A. H.

Corps, non-commissioned officers and men, as well as patients in hospital and soldiers attached for duty.

In 1883 Lord Morley's committee made recommendations, which were adopted, the principal ones being the vesting of the control of hospitals in the medical officer in charge, and the assimilation of the A.H.C. and A.M. Department, both to wear the same uniform (blue with black facings).

In 1889 a committee, under Lord Camperdown, was appointed to make inquiries into the pay, status, and condition of the medical service. One of the committee's recommendations was the adoption of military titles, prefixed by the word "surgeon," as, for instance, "surgeon-lieutenant-colonel," etc. These titles carried precedence and other advantages, but a limited executive power, hence they were found unsatisfactory.

By Royal Warrant of July 1st, 1898, the medical staff corps became the Royal Army Medical Corps, and medical officers were given full military titles. The duty of supplying transport to the R.A.M.C. devolves upon the Army Service Corps, the officer commanding the detachment taking his orders from the senior officer of the R.A.M.C.

Regiments which have served in the great battles of history are justly proud of the deeds of their predecessors, and emblazon the names of the regiment's battles in golden letters on their colors, while *esprit de corps* runs high. Should we not also be proud of the medical corps of the Imperial army, which has served with distinction and fidelity in *every* battle since Marlborough's time? Soldiers have their heroes. We also have ours. The names of Ambroise Paré, Peter Lowe, Richard Wiseman, Larrey and Longmore are emblazoned on the annals of military medicine. Nor have medical officers been lacking in military courage. "Have you ever heard of Surgeon Thomson, who, during the Crimean war, when the army marched off after the terrible battle of the Alma, volunteered with his servant to remain behind on the open field with 500 wounded Russians, and passed three awful nights, these two Englishmen alone, among foreign foes, none able to raise a hand to help himself? Have you heard of Assistant Surgeon Wolseley, of the 20th regiment, who, at the battle of Inkerman, had quietly established his dressing station in that awful place, the Sandbag Battery? When the 150 men were forced to desert it, they fell back and found in their path a Russian battalion. There was not a combatant officer left, so the assistant surgeon took command. He had not even a sword, but laying hold of a musket with a fixed bayonet, he gave the word of command, 'Fix bayonets. Charge.' The soldiers answered with a British cheer and sprang forward to the attack. The next instant they were breaking their way through the

Russians. Only one-half got through alive, and among them our hero. Have you ever heard of Surgeon Landon, who was shot through the spine while attending to the wounded on Majuba Hill? His legs were paralyzed, but he caused himself to be propped up, and continued his merciful work until his strength ebbed away. You may recall the more recent case of Surgeon-Captain Whitchurch, who gained the Victoria Cross at the siege of Chitral for the most determined courage in saving the life of Major Baird.

"There died a short time ago a certain Surgeon-General Reade, C.B., V.C. During the siege of Delhi, while attending to the wounded at the end of one of the streets of the city, a party of rebels advanced from the direction of the bank, and having established themselves in the houses of the street, commenced firing from the roofs. The wounded were thus in very great danger, and would have fallen into the hands of the enemy had not Surgeon Reade drawn his sword, and calling on a few men near him to follow, succeeded, under a very heavy fire, in dislodging the rebels from their position. Surgeon Reade's party consisted of ten in all, of whom two were killed and six wounded."* Surgeon Reade was a Canadian, and one of the two sons of a colonel in the militia, both of whom greatly distinguished themselves. I might add that of 118 wearers of the Victoria Cross fourteen are surgeons, nearly 12 per cent. of the whole number, or $9\frac{1}{2}$ per cent. of all the officers of the army, a record of which we may be justly proud.

Knowing the brilliant and meritorious services of army medical officers it gives one a shock to learn that it was only after many failures, many struggles and much heart-burning, after a prolonged period of unjust treatment, which, to the colonial mind is incomprehensible, that the medical service of the Imperial army has reached the present point of high efficiency and excellent organization—a state of things largely due to the tenacity with which the leaders in the struggle have stuck to the text, and the cordial and active support which they have received from the medical profession throughout the empire, chiefly through the medium of the British Medical Association. We, in Canada, have all the advantage which comes from the experience of others without the trials and anxieties which attend the gaining of experience, and I am happy to think that nothing but the best of feeling has always existed between the different branches of the service. No better proof of this can be adduced than that we have as the responsible Minister of Militia and Defence, an able, open-minded and progressive medical officer, Surgeon Lieut.-Colonel the Hon. F. W. Borden, M.P., who has the very great advantage

* Banks. "The Surgeon of Old in War."

of the assistance of one of the ablest and most tactful general officers by whom the Canadian militia has ever been commanded. Under the united guidance of the SOLDIER and the SURGEON, I look forward with confidence to the future.

Having thus sketched the historical and evolutionary side of my subject, let me ask your attention to the practical work of the medical service in so far as organized relief and transport of the wounded are concerned. In order to understand the way in which a wounded soldier is brought from the fighting line to the base hospital, it is necessary to refer to the composition of a British army corps in the field. Such an army corps would consist of about 40,000 men, about the strength of our militia, under the command of Lieutenant-General. It would be composed of 3 divisions of infantry, and each infantry division would contain about 10,000 men in 2 brigades. The medical detail for each division would be, besides the regimental bearers, 2 bearer companies, 3 field hospitals of 100 beds each, and one divisional field hospital in reserve. The corps troops have also one field hospital. The cavalry division would number about 6,500 men, and would have attached to it 2 bearer companies and 3 field hospitals of 100 beds each. The whole medical detail for the division, exclusive of regimental bearers, would be 8 bearer companies, 10 field hospitals, 2 station hospitals and 2 general hospitals, the latter being on the line of communication at any distance up to 100 miles from the front. The supreme command of the medical arrangements is vested in a surgeon-general, who is the P. M. O. of the force. In many instances he is assisted by Deputy P. M. O., who is a colonel. The duties of the P. M. O. are to advise the G. O. C. on all matters concerning the health of the troops. This would include such important matters as food and clothing, and any special precautions rendered necessary by the climate, also the oversight of his department. The importance of his functions can hardly be overestimated, for his business is to direct the measures for *keeping the men in health*, which is the main business of the army surgeon, so that at the critical time they be available.*

* MORTUARY STATISTICS OF THE SPANISH-AMERICAN WAR.

"According to the official report of the Adjutant-General of the army, the entire number of deaths in the service since the 1st May last is divided as follows:

Killed	329
Died of wounds	125
Died of disease	5,277

In other words, for every one man who died as the result of battle, twelve perished as the result of bad food, carelessness or mismanagement of the War Department."—*Evening Bulletin*, Philadelphia, March 11th, 1899.

The losses on the Union side during the Civil War were:

Killed in action	44,238
Died of wounds	49,731
	<hr/>
Died of disease	93,969
Cases of disease reported during five years of war	186,216
	<hr/>
	5,424,547

The last Ashanti campaign was, you will remember, a "doctors' war." Nor would Khartoum have fallen, nor would Omdurman have been successfully fought but for the skilful foresight of the men who kept the troops in health in the trying climate of Upper Egypt. Thanks to the excellent medical arrangements, a tour of service in India is no longer a thing to be dreaded. The P. M. O. has also to arrange for the transport of the sick and wounded, no small matter in a difficult country, and to fix the sites of the field, stationary and general hospitals. Each division has also its P. M. O.

The *first line of assistance* to the wounded consists of the M. O. attached to the unit and his regimental medical staff, which is composed of one corporal, whose duties are to take charge of the panniers, which are usually carried on a mule; one orderly who carries the field companion and the surgical haversac. Four men per squadron, or two men per company, constitute the stretcher section. The medical equipment of the unit consists of one surgical haversac, one field companion, one water-bottle and a pair of panniers. The duties of the stretcher-bearers, when an action is pending, are, after placing their rifles in the regimental transport, to take the stretchers, and when occasion arises to render first aid, and carry the wounded man and his kit to the collecting station, beyond which they do not go, but at once rejoin their companies. Lord Wolseley says that when a man falls wounded there are ten men always ready to take him to the rear. I have found this to extend to dead bodies. The solicitude of men in action to get to the rear on a fair excuse is remarkable. The first aid dressing, which every man carries in the field, is done up in a waterproof cover, and is sewn up inside the man's tunic pocket. It consists (1896) of two safety pins, gauze bandage and piece of gauze, and a compress of charpie saturated with an antiseptic (bichloride of mercury). During the late Spanish-American war these first aid dressings are said to have saved many lives. At the collecting station the man is seen by the medical officer, who arrests hemorrhages and attaches a tally on which is stated the man's name, number, rank, regiment, wound, treatment, and any special instructions required, such as, "look out for bleeding," or to place the patient in a particular position. In the Italian army tallies of different colors are used for severe or slight injuries.

I now come to the *second line of assistance*, the Bearer Companies. They are departmental, and are formed by the Royal Army Medical Corps. They are divided in action as follows: In front (that is, in rear of the fighting line), 38 of all ranks; at the collecting station, or in charge of the waggons, 12; at the dressing station, 10, including three

medical officers; and in rear, 10. The front division of the bearer company does similar work to that of the regimental stretcher-bearers, *i.e.*, they render first aid and carry wounded to the collecting station. As they arrive at this point they are placed in one of the ten ambulance waggons in waiting and taken to the dressing station. Each waggon is in charge of a non-commissioned officer of the R.A.M.C. On arrival at the dressing station the wounded are unloaded and placed in two groups—on the right the severely wounded, and on the left the slightly wounded. The site of the dressing station is always sheltered, if possible near a good road and water, and not far from the collecting station. Here it is that the wounded receive proper treatment and primary operations are performed. At the close of the action the bearer companies search the woods and ditches for wounded. In Germany this work, at night, is done with the aid of dogs, on whose backs are first aid panniers and lamps.

From the dressing station the wounded are passed on to the *third line of assistance*, the Field Hospital. A Field Hospital is attached to each brigade, and on the line of march follows the bearer companies. These hospitals are mobile, and keep in close touch with the troops. After or during an action the site of a field hospital should be out of range of artillery fire and well sheltered. Buildings may be used, but churches should be avoided, as they are apt to be damp, cold and ill-ventilated. Their only advantage is their proximity to the graveyard. Collecting and dressing stations, field hospitals and bearer companies are under the Red Cross, but regimental bearers are not, for they carry arms and are available in case of necessity as combatants. In wars on savage peoples all ranks may have to fight, as, for instance, at Rorke's Drift. Hospitals fly the Geneva Red Cross flag by day, and show two white and one red lantern at night.

As soon as possible wounded are passed out of the Field Hospital into the *fourth line of assistance*, the Stationary Hospital. They are gradually drafted out of this into the *fifth line of assistance*, the General Hospital, a large hospital containing 400 beds, and in charge of a Colonel, R.A.M.C.

The *sixth line of assistance* is the hospital ship; and the *seventh and last* is the Royal Victoria Hospital, Netley. The principal object in view, after treatment, is to "clear the front of wounded men," who impede the movement of the army.

Having said so much on the historical and other aspects of the Imperial Medical Service, permit me to add a little about the past and future of our own militia medical arrangements. It is strictly within the facts that our medical service is in a lamentable and unorganized condition. If we were suddenly plunged into war, we would suffer as serious disasters as befell

the Army of the United States during the late Spanish-American war. This war has clearly demonstrated that trained army surgeons and trained ambulance men and transports cannot be improvised with success. The result of such a course is untold suffering to the troops, great loss of life, which might have been avoided, and discredit upon a department which did its best, but had a numerically insufficient staff to work with. Let us take the lesson of this war to heart and profit by the painful and costly experience of others, rather than wait to learn the lesson for ourselves at a great price of blood and treasure.

Up to 1862 the supplies to camps of instruction left much to be desired, to put it mildly. The surroundings of the sick in many camps of instruction could hardly have been worse. I am not claiming too much for the Association of Medical Officers when I state that to that association belongs the credit of drawing professional and public attention to much-needed reforms. Let us hope that the reforms and improvements which have already been made merely precede a complete reorganization of the Medical Department, under our able Director-General.

I would respectfully submit that the following are among the changes which might properly be made to place the department on an efficient basis:

1. Abolition of the regimental system of medical officers, and the formation of a Royal Canadian Militia Medical Corps, to which all medical officers would belong; those not serving with units or on the reserve would be attached to bearer companies. I believe more efficient work would be done by officers whose *interests were identified with departmental rather than regimental affairs*. I would not advocate a sudden and violent change in this regard, but rather would suggest that all present medical officers be permitted to continue to wear the uniform of the corps to which they are attached, but I think that all new appointees might be required to adopt medical staff uniform. Medical officers attached to battalions would command the regimental medical staff. The departmental establishment would include at least five bearer companies—one each at Halifax, Montreal, Toronto, London and Winnipeg. From the bearer companies field hospitals could be developed in time of war.

The grades in the medical service, in my humble opinion, should be: Surgeon-Colonel, Surgeon Lieutenant-Colonel, Surgeon-Major, Surgeon-Captain, and Surgeon-Lieutenant. Honorary rank should be abolished. It is as unsatisfactory as relative rank.

These bearer companies would be educational, because at the centres named a certain proportion of the strength could be

recruited from medical students, who might be trained for the medical service. I might add that all Canadian militia is "royal" since 1814; therefore, the proposed title of the corps is in accordance with fact.

2. I think it is essential to good work, by the medical officers, that they shall receive instruction in their special duties, and that they shall be proficient in company and ambulance drill. The same remark applies to the non-commissioned officers and men of the regimental medical staff. For this purpose I would advocate the establishment of ambulance schools of instruction on the plan of those in operation in London and in New South Wales.

3. Medical officers, like combatant officers, should pass a qualifying examination within twelve months of their appointment, which should be provisional, and not to a higher rank than that of a lieutenant, and upon promotion to field rank.

4. Each military district should have a principal medical officer, in most cases a permanent officer, but not necessarily in all.

5. Medical officers should be given control of transport and supplies for hospital purposes, food and medicines, and authority over all connected with the hospitals in camps of instruction or during other service in the field.

6. On all field days the medical department should be exercised in their special duties, a certain proportion of men being supplied with tallies describing the nature of their supposed injuries, and ordered to fall out from their companies to be properly dealt with by the medical officers and bearers. Collecting and dressing stations should be formed in the proper manner and instruction given by the p.m.o. of contending forces.

7. A reserve of medical officers might be formed, to include those who have served, but who for various reasons have been obliged to drop out of active connection with the force, and of medical men of established reputation, who would be willing to serve in time of war. This arrangement would give them seniority and would assure the department of the best surgical skill.

8. The Red Cross Society proposes to keep a register of nurses who would be willing to serve in time of war. Their names might be noted by the Militia Department.

9. A knowledge of the first aid to the sick and injured might be diffused by the medical officers, by means of lectures, under the auspices of the St. John Ambulance Association among the officers and men of the force.

These are some of the suggestions I desire to make. Some will meet with approval and some with dissent. They are offered with my most earnest wish for the welfare of the soldiers and surgeons of my beloved native land.

Clinical Notes.

A CASE OF ACUTE STREPTOCOCCUS INFECTION.

REPORTED BY DR. W. C. WHITE,
Of the Resident Staff, Toronto General Hospital.

E. D., aged 18, admitted to the Toronto General Hospital under Dr. W. H. B. Aikins on the 23rd of January. Three days previous to this, while walking across the floor, she stepped into a stovepipe hole and scraped the front of her leg. She went on with her work, however, and noticed nothing until the night before her entrance to the hospital, when her leg began to swell and become red and painful. On admission her right leg was much swollen, very painful on pressure, and showed a small abrasion on the front of the tibia just a little below the centre of the leg, which was very painful, and the patient could not bear it to be touched. A probe could be passed into this opening to the bone, and the flesh here was dark, soft and very unhealthy in appearance. The glands in the groin were swollen and very painful. Her temperature was 104 on admission at 9 p.m.; pulse, 108, full and tense; respirations, 24; tongue furred. There was a marked septic odor about the patient. She was given 3 grains of calomel, to be followed by mag. sulph., $\frac{3}{4}$ ss, in the morning. The opening in the leg was enlarged to about one and one-half inches. The leg was done up in a 1-20 carbolic acid poultice, which was changed every two hours; also three 5-grain powders of phenacetin were given at intervals of two hours, and stimulants freely administered.

24th.—Temperature fell to 98; pulse, 104; patient feels easier, but is slightly nauseated. Had a free movement of bowels.

Later.—Vomiting set in, which increased in severity and frequency. Every means was tried to allay this, but all to no avail.

Evening.—Bowels have moved several times, but nausea and vomiting still persist; three further incisions made in leg, and poultices continued.

25th.—Temperature, $97\frac{2}{3}$; pulse, 90; respirations, 26. Vomiting continued; could not be stopped. Digitalis and strychnia given hypodermically and nutrient enemata tried, but these were expelled. Patient grew rapidly worse and died at 10.15 p.m. Just before death respirations were 40, and pulse 132, small and tense.

Post-Mortem, partial.—Incisions in leg enlarged, and tissues

found very soft and dark-colored. Kidneys removed, and showed microscopically cloudy swelling.

Cultures from leg and blood taken with antiseptic precaution showed pure cultures of streptococcus pyogenes in great number.

The case illustrates how rapidly a patient may be carried off by septic infection through a very small abrasion, the time from the accident to death being only five and one-half days. The patient was a very strong girl, and apparently healthy in every other respect. She remained perfectly conscious until within a few minutes of her death.

TWO CASES OF POLIOMYELITIS ANTERIOR CHRONICA.

BY ALEXANDER McCAIG, SAULT STE. MARIE, ONT.

CASE 1.—Notes, December 6th and 7th, 1898. Mrs. B., widow, aged 48. Family history, negative. Personal history: Up to present illness, patient engaged in grocery business, from which she turned out a competency of \$60,000. Always a strong, healthy woman, weighing when well 225 pounds. Of strong mental capacity and good business instincts. Could give from memory the minutest details of her business affairs. No children; menopause at forty-seven, at onset of present illness. Present illness began thirteen months ago. Onset with pains and weakness in ankles, knees and elbows, so that she was treated at Mount Clemens for rheumatism. The muscles of the thumbs then began to atrophy, and the weakness in the arms and legs gradually became worse. Patient did not lose much flesh, but muscles became very soft and flabby. Eight months after onset of trouble difficulty in walking was marked, patient could not walk alone; could not raise foot from the ground, and toes dragged. Bulbar symptoms developed during past two months. Present condition, thirteen months after onset: Patient unable to move about alone; muscles of hand and forearm atrophied; muscles of the calf atrophied, soft and flabby; rigidity and flexion of elbow; atrophy of deltoids, so that patient cannot raise the arms; toes drag; knee-jerk greatly exaggerated; sensation good; sphincters intact; mind clear and active. Bulbar phenomena were observed about two months ago—began with hesitation and thickness of speech. At present, tongue, larynx and lips affected; voice feeble, cannot speak above a whisper; speech slow and hesitating; articulation difficult and hard to understand; deglutition not impaired. This case is interesting because of the

successive stages in the progress of the disease, also by the rapidity with which they have followed one another. The disease began with the usual weakness and pains, followed shortly by the muscular atrophy due to destruction of the multipolar cells of the anterior cornua. This was followed by a typical condition of amyotrophic lateral sclerosis, due to sclerosis of the cerebral segment of the fibres of the antero-lateral descending tracts of the cord, and latterly the development of bulbar phenomena indicates the involvement of the cells of the medulla. This patient has not been under observation now for some two months, having gone to California for the winter.

CASE 2.—Notes, February 24th, 1899. Mr. McL., farmer, aged 55. Family history: Nothing of importance in this. Personal history: Pioneer farmer; hard worker; always temperate. No history of specific trouble of any kind. Present illness began about six months ago. Complains only of weakness; no pains; fatigued by least exertion, and much by walking; weakness felt most in knees and muscles of the thighs; coldness of hands, and feet very troublesome; cannot perform delicate manipulations with hands; first noticed this on lacing his shoes, in being unable to tie his shoe-lacings. Present condition: Atrophy of muscles of upper and lower extremities, most marked on the thumbs of the upper extremity and in the muscles below the knees on the lower extremities; knee-jerk slightly exaggerated; slight hesitation in speech; patient has noticed that it has been hard for him to get started to speak for some time; "tongue feels thick;" sensation good; no inco-ordination; sphincters intact; appetite good; bowels regular; no headache; dizziness; pupils active. In this case the destruction of the multipolar cells has taken place to a great extent, and sclerosis of the nerve fibre has begun. Treatment: strychnia and massage.

TWINS, EACH WITH SYRINGO-MYELOCELE.

BY H. A. WRIGHT, M.D., OAK LAKE, MASS.

The following case may prove of interest, mainly on account of its rarity. L. Emmett Holt states that "I once saw two successive children in the same family with spina-bifida."

On the 18th June, 1898, I was called to attend Mrs. B., a very healthy woman, in her sixth confinement. Her four children all healthy, one child stillborn at term, all labors easy. Labor in this case was rapid and easy. The twins both breech presentations and having separate membranes and placenta. Both male and each spina-bifida in almost identically same

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position, viz., lower dorsal region, each being also hydrocephalic. Children weighed five and five and one-half pounds respectively. The first-born and weaker child lived ten days, the other three months and nineteen days. The one showed no gain, the other made marked advance. In each case the hydrocephalus and tumors increased with considerable rapidity, death in each case being due to rupture of the tumor sac.

Each case was accompanied by convulsive movements. Bowels and bladder acted naturally in each case, but lower extremities were paralyzed. Tumors first dressed with acetanilid, boracic acid, collodion, absorbent cotton and carbolized gauze, later with iodoform, collodion, absorbent cotton and iodoform gauze well padded around margin of tumor, and fairly firm compression.

Any operative procedure was considered hopeless, therefore not undertaken. No autopsy held.

Selected Article.

STORY OF MEDICAL LIFE—A NEEDFUL LESSON.

BY PHILIP LAFARGUE.

"Tchah!" cried Bredon, suddenly, from his seat at the window, whither he had betaken himself to catch the last of the daylight for some small print he was reading.

Startled by the unusual explosion of disgust—for Bredon, as befits one whose province it is to deal with the delicate organ of voice, is a man of placid and nicely controlled temper—Dr. Parradine and I interrupted our chat by the fire and looked across at him. We were taking tea at the club in the cosy smaller card-room, while we waited, with no great impatience on my part so long as the old man would talk, for a fourth to make up our rubber.

"What's that language you're swearing in?" asked Parradine.

"I'm blest if ever I prophesy evil again," Bredon cried, still with unaccustomed asperity.

"It is wise to avoid it, when you can," said the old doctor; "no one loves you the better for it."

"I felt convinced the poor little beggar must die, and never gave the case another thought," Bredon went on. "And it seems he got well after all. Gar! what a fool it makes one look!"

"One don't look it the less for minding it," Dr. Parradine observed.

"Luckily for me, Orme saw the child the same night, and told them, as I had done, that antitoxin was his only chance."

The old doctor was lying back in his chair, with all his limbs relaxed and his eyes fixed dreamily on me. I saw them change suddenly, as one sees a terrier prick its ears, and he straightened his spine almost imperceptibly.

"What's that paper you've got hold of, Bredon?" he asked.

"Only some antivivisectionist rag they've sent me. Trust them to rub it in when they get the chance. Listen to this, Parradine:

"The resolution was seconded by Sir Rupert Uffington, Bart., who, in the course of a brief but vigorous speech observed that the more unanimous the doctors were the less disposed was he to trust them. Only the other day, when his own child was attacked by malignant diphtheria, he was solemnly warned by

three of the most celebrated physicians in London—he would not be so ungenerous as to name them—that without the use of this new-fangled serum the case must inevitably prove fatal.' (I said, "almost inevitably," Bredon corrected.) 'He was thankful, however, to say that he had found courage, after a painful struggle against his own weakness—(No, no)—and the pleadings of his friends, to resist all dealings with the accursed thing, and the result, under Providence, was that with good old-fashioned nursing and treatment the child had made a splendid recovery—(Hear, hear)—whilst he had been spared the ignominy of accepting a benefit—as it turned out, a quite superfluous benefit—at the cost of some poor helpless, tortured animal. If ever they were tempted to profit by the cruelty of the scientists, and to put themselves blindly in their hands, he begged they would bear his case in mind.'"

With the first sentence of the recital the alertness faded from Dr. Parradine's face, and he listened to the remainder with a sphinx-like smile. The moment it was over he jumped up and planted himself on the hearthrug with his back to the fire.

"That's a pretty bad score off one, isn't it?" said Bredon.

"Well, it does sound as if you had been rather precipitate," observed the old man, with, as I thought, less than his usual good nature. "But come and sit down and tell us all about it. You are not the man to give yourself away for nothing. We are all ears—eh?" and he turned to me with a look of intelligence, as if to bespeak my close attention.

"What do you want to hear?" asked Bredon, throwing himself rather wearily into a chair.

"Why, everything, man," cried Parradine. "What they all said and did, and how they looked. Give us the facts—all the facts. Let's have the scene as it would work out on the stage, for instance."

"Why, it was only a case of a poor little curly-haired beggar, going choking to his death, as I thought, because his father was an inflated ass."

Dr. Parradine threw up his hands despairingly.

"There! Oh, you consultants! You come dashing up to your case, turn upon it the cold, dry light of your experience—you do it to admiration, I grant—then give your verdict, pocket your fee, and drive away. To you it's a mere bald, isolated crisis—a bit of a play heard through the phonograph. Why, as often as not, you miss the whole vital interest of the thing—the human interest, that is to say. I have seen you do it, time and again. You've no dramatic instinct. You are too much wrapped up in your 'ologies. Here's a case in point—eh? Distracted parents, wringing of hearts, conflict, the very soul of drama, and you see nothing but a poor little

misery gasping for breath. What's the suffering of that half-unconscious youngster in his nursery compared with the agony in the drawing-room—eh? Here's Sir Rupert Uffington, by all accounts an earnest-minded, estimable man, if ever there was one, an honor to his class—”

“A stilted jackass!” cried Bredon.

Dr. Parradine threw an appealing look at me.

“Here's poor Lady Uffington,” he went on—“a charming, simple, beautiful young creature, a pattern wife, devoted mother—”

“A pretty nonentity!”

The old doctor shrugged his shoulders.

“Aren't you unusually sweeping in your judgments to-day, my dear Bredon?”

“Oh, these swells are all alike—turned out of the same old mould.”

“Yes; the old, old mould of fathers and mothers, God bless it! I used to know Uffington when he was a little chap himself. I knew his father before him, though he was a homeopath and a teetotaler and everything that begins with an ‘anti.’ I've come across most of these people at one time or another, you see. They go the round of us to taste our quality, and if it happens to tally with theirs—why, they stay by us. That's the pull of practising in London, where there is scope for natural selection, and doctor and patient can divorce each other for incompatibility of temper—eh? It's pleasant to have known people, however, whether they cotton to you or not. The public drama is so much more vital when you have the private measure of the actors in it. Of course—” He broke off, and swept his plump white hand across his forehead. “But why on earth do you fellows let me ramble? Yes, as I was saying, I knew Sir Rupert when he lived in a velvet dress and broad lace collar. Quite a picturesque child, with a quaint charm of his own that was not exactly that of childhood—a sedate, old-fashioned dignity, self-possession and sense of personal merit, which any other parents but his would have incontinently smacked out of him. Well, he grew up—more's the pity, perhaps. He was too good for Eton, of course; but he did creditably at Balliol, has earned a certain respectful toleration in the House, and his name on a charitable committee means guineas, I hear. No: he's not quite an ass, Bredon. Men in his position don't set themselves to swim against the general current unless there is something in them out of the general.”

“Oh, I daresay I was too hard upon him,” Bredon admitted; “but he put me out of patience. He seemed to think more of his own reputation than of the life of his child.”

“Yes, that would be in his character, no doubt,” said Parra-

dine. "He's a survival, you see, of the days when men prized their honor—that is to say, what people thought of them—more than their own life, to say nothing of their children's, eh? Most of us have come on since then, or gone back, whichever it may be. What is he like now, Bredon? He promised to be handsome."

"Oh! he's good-looking enough in his way," cried Bredon; and then, after a moment's reflection, proceeded to deal us out his portrait: "Tall, spare, erect; somewhat mincing in speech and movement; in manner coldly courteous—you never seem to get within a couple of yards of him; fine, but close-set eyes, which look past you and make you feel of indifferent account; a long, thin face, with good features; and an odd-shaped head, that sets you itching to press the brain bodily back from the forehead into the occiput; not much hair, and what there is too straight and fine, and, for his years, too grey. One would say he had lived all his life in stock and cravat, metaphorically, as if his dignity required artificial support—a man who takes obstinacy for strength and prejudice for independence."

"I wronged you, Bredon," said Dr. Parradine. "I was not aware that you ever observed anyone but your patients so keenly."

"How could I help it?" cried his friend. "I was pounding at him for a quarter of an hour, though, as I said, I never seemed to get within two yards of either his mind or his heart. He's fenced in by prejudice and conceit. He allowed me politely to understand that he did not believe a word I said. But it was what I overheard in the next room that finally disgusted me with him. His wife sent to ask him to speak to her in the boudoir. I heard the poor woman pleading with him, and, pon' my soul I pitied her to be bound to that egregious iceberg. 'Impossible, Viola; impossible!' we heard him mincing, as he strode up and down. 'How can I face the world again if I have not the courage of my solemn convictions? It would be to stultify myself completely. I am looked to, you must remember, for guidance and example. You would make of me a broken reed. No, no; you must leave it in my hands, Viola. This is a question for a man to settle with his own conscience.' Bah! as if it had been his child only; as if it were *he* who had brought it into the world with groans and travail! I could not hear what she said; I only heard the tears in her voice. Anyone who wasn't a brute must have yielded to them."

"Poor girl! poor girl!" cried Parradine.

"And I believe he would have yielded if she had stood up to him. But I suppose she had always given in before. At last I think she lost temper with him, for I heard her cry warmly,

almost threateningly, 'Believe me, Rupert, you will regret it.' After that, of course, the game was over. It put his back up for good and all. He returned to us and said, with the nearest approach to feeling he had yet shown, that no helpless animal should suffer a pin-prick to save a dozen of his children. And so we took our leave of him. Well, he's got us on toast this time. Don't think I'm not glad the little beggar lived. But it's no thanks to his parents."

The old doctor smiled at him mysteriously—I could see it even in the dusk—dropped his cigarette end into the fire, and came and sat down leisurely between us.

"I remember a very similar case, if it won't bore you, eh?" he began. "One evening an old patient of mine, a beautiful creature whom I had watched grow up from the nursery, until I lost sight of her on her marriage, came to me in an agony of distress. Her child, too, seemed likely to die of diphtheria, and her husband stubbornly refused to let the doctors make use of the new treatment; but she was determined, if she could, to administer it herself without his knowledge. It would be difficult, she admitted, for the child was jealously isolated, and she was scarcely allowed in the room. But that night she thought she could contrive to have it for an hour to herself. Wouldn't I help her, as an old, old friend? Of course I demurred and raised a heap of difficulties. I showed her the syringe, fully expecting to scare her from her project. She blanched when she saw the needle, and felt its point at her skin, as I demonstrated its use on the back of her hand. But yet she insisted. I had forgotten what a brave little heart she had always shown even as a child behind her nervous, uncertain manner. Well, to cut a long story short, in the end she went off with syringe and serum, a supply of which I luckily happened to have by me, and I learnt afterwards that that poor, shrinking, inexperienced girl had dug the needle twice into her own flesh before she would trust her skill to use it."

"What a ripper!" I cried. "And she saved her child?"

"Her child recovered," said Dr. Parradine, with scientific caution. "I suppose it was all very wrong and unprofessional on my part, but I am a soft-hearted old buffer, and if the case recurred, hang me if I wouldn't do it again."

"Ah!" sighed Bredon, "if Lady Uffington had shown but half her pluck!"

"My good Bredon," said the old doctor, very deliberately, smacking his lips, as it were, over the effect, which he had all along been preparing, "it—it *was* Lady Uffington."

"Great Heavens!" cried Bredon after a moment of dumb-founded silence. "You don't say so? Lady Uffington! Hurrah! Why, then, Sir Richard and I were not so wrong after all."

"Orme seldom is wrong," observed Dr. Parradine; "and as I once heard him say, 'When doctors agree (he being one of them, *bien entendu*) who shall differ?' Always excepting Sir Rupert Uffington, Bart."

"Yes; but we have to lie under the harrów all the same," said Bredon, gloomily.

"Well, you are not the first doctor," cried Parradine, "who has had to choose between his own reputation and the peace of a household. Luckily, we are not all 'survivals.' I remember a doctor in the country—"

"Of course, Sir Rupert must never know," exclaimed Bredon, too preoccupied to study courtesy.

"He knows," said Parradine.

"Knows?"

The old doctor nodded assent.

"Why, then, what a blackguard the man must be," cried Bredon, hotly, "to go and make capital out of the case!"

"What was the date of that meeting?" Dr. Parradine asked quietly, and Bredon had to confess that the report itself was a month old.

"Exactly. No; Sir Rupert is not a blackguard, whatever else he may be. I shouldn't wonder if he made you a handsome apology. He was brought up, you see, on a diet of *noblesse oblige*."

"But how did he come to know?" I asked.

"Through me," cried Dr. Parradine, with a humorously grandiose gesture. "If you are not weary—eh? Well, Lady Uffington came to see me again only a few days since—a wreck, all her pretty color gone. She had evidently some great trouble on her mind, but it was half an hour and more before I could wheedle even an inkling of it out of her. She was suffering, I concluded at last, from the effects of an acute disillusionment. She had suddenly discovered that the golden idol her young heart worshipped stood upon feet of clay. The conversation you overheard, Bredon, represented the sudden opening of a domestic tragedy. In that moment an adoring wife saw her husband's soul, till then jealously veiled from her, in all its nakedness; she saw his pitiful egoism standing out blackly like a skeleton through the dissolving flesh. Wasn't I right in saying that the body-agony of the child went for nothing compared with the soul-agony of the parent? No wonder that a brave, unselfish, trustful woman like Lady Uffington felt the shock to the centre of her being! No wonder she sickened and pined! And then the constant fret of her secret—the memory of that desperate, clandestine act! And Sir Rupert's daily air of triumphant wisdom! You may bet, he didn't spare her. I expect he made himself intolerable, till

she realized her smallness more and more every day. It was as if she had lost her husband irreparably to save her child. Her prize had turned out a blank. You can imagine the effect, the mere physical effect, of such a situation upon a modern, high-strung, self-torturing nature."

"Well?" we prompted him.

"You want to know what I said—eh?" Parradine continued. "Well, I told her to drive straight home and make a clean breast of it all. Of course, she shrank from it, and I had to use the devil's own eloquence to persuade her. But clearly it was the only thing to do. She could not hope for peace until she had confessed; and as for Sir Rupert—why, it was the very lesson he had been wanting all his life. He had to be shown that hers was the stronger and more single nature, that she was a woman who could think and act and love for herself—that, in short, where the children are concerned, the husband's conscience has no claim to override the wife's. Happiness in married life is only possible when each knows, and knows that each knows the other—strong points and weak. The pretty delusions of courtship make but a rickety foundation for it. So I bade her take her courage in her hands as she had done before, stand up to her husband, and let him feel which was the better man."

"And she did it?" I asked.

"I presume that she did," said the old doctor, "At any rate, I have very good reason to believe that in a certain eligible mansion which you know, Bredon, the breeches have recently changed wearers. Dear me, how the afternoon has slipped by! What shall we do? Play dummy—eh?"

"I think," said I, "we might leave that to Sir Rupert."

—*The Practitioner*, February, 1899.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

The regular meeting of this society was held January 28th, 1899, Dr. Primrose in the chair. Present: Drs. Peters, Rudolf, Bingham, Goldie, Mackenzie, H. H. Oldright, Wm. Oldright, Parsons, McPhedran. Meeting called to order 9.30 p.m. Minutes of last meeting taken as read and adopted.

The Secretary read a letter received from Dr. C. R. Dickson, of the Canadian Medical Association, asking that five members of the Pathological Society be appointed to act on the committee of arrangements for the meeting of the Association to be held in Toronto in the summer of 1899. The following were appointed: The President, Recording Secretary, Drs. J. E. Graham, McPhedran and Bingham.

Dr. Bingham showed a skiagraph of old dislocation of right hip in child aged 11.

History.—Family history: Mother had tuberculosis, otherwise history was negative. Previous history: At five years of age congestion of the lungs; at three years fell and hurt right hip, was kept in bed with extension applied for three months. Since that time slight pain. Considerable limp.

Present Condition.—Examination: Lateral spinal curvature in lower dorsal and lumbar regions with convexity to right. Compensatory curve in upper dorsal region. Right leg: Knee bent, rotation outward, heel one inch from the ground in standing. Measurements at hip all accord with diagnosis of dislocation. Operation, November 17th, a.m., by anterior incision. Acetabulum found filled up; neck of femur shortened; ridge about head of bone; adhesions cut away; acetabulum cleared out, and head of bone replaced; extension of eight pounds applied, also plaster cast. After operation temperature rose to 105.5. Pulse, very weak; delirium; no dyspnea. Patient died 10.40 p.m., November 18th. Question as to cause of death.

Discussion by Drs. Peters, Wm. Oldright and J. J. Mackenzie.

Dr. Wm. Oldright showed patient with rodent ulcer of orbit. History, of fourteen years, beginning as small nodule, now 2½ inches in diameter. Potassa fusa was being applied.

Discussed by Dr. Peters.

Dr. Oldright also showed a most interesting heart with one ventricle, two auricles, and patent foramen ovale. There was also pulmonary stenosis. This case was fully discussed.

Multiple Intussusceptions of the Dying.

Dr. H. H. Oldright: The specimens of multiple intussusceptions which I present are from an autopsy on an infant three months old which died of marasmus. There were four present in this case, but there may be as many as from eight to a dozen or more. The intussusceptions occur during the death agony or during somatic death after the heart has ceased to beat, and are due to irregular peristaltic contractions. This condition occurring during the death agony was recognized and described in contradistinction to the clinical *ante-mortem* form as early as 1678 by Louis (Hévin: "Memoirs Academie de Chirurgie," 1768, IV. p. 222), by Baillie in his "Morbidity Anatomy," and by Voitgel, who saw it both in man and animals ("Handbuch de Path., Anat.," Beh. II. 568). Holt, in "Diseases of Infancy and Childhood," gives a good description of the phenomenon. He says it is found in about 8 per cent. of all autopsies on infants, that it occurs but seldom in children over two years of age, that the invaginations are usually descending, enteric and multiple, and more frequent in the jejunum than in the ileum. They may be two or three inches long and are sometimes twelve inches. They occur in all varieties of disease. On this point Ziegler remarks that the condition is more frequently found in death from cerebral or intestinal disease. The condition is easily differentiated from the clinical forms by the intussusceptions being multiple, and by there being no inflammatory adhesion between the layers.

Discussed by Dr. Rudolf.

Dr. Primrose presented specimens of pachymeningitis hemorrhagica (to be published later).

Discussion by Drs. Peters, Parsons and J. J. Mackenzie.

The meeting then adjourned.

H. C. PARSONS,

Recording Secretary.

FEBRUARY MEETING.

The regular meeting of the society was held on February 25th, 1899, Dr. Primrose, President, in the chair. Present—Drs. Hamilton, McPhedran, Carveth, Grieg, Wilson, J. J. Mackenzie, Goldie, Peters, and Rudolf. Visitors—Dr. Westman, Mr. Tanner. Minutes of last meeting taken as read and adopted.

Cardiac Hypertrophy.

Dr. Grieg presented specimen of cardiac hypertrophy. The patient had died suddenly. Clinically the case had shown increase of cardiac dulness. The apex beat was displaced

downward. There was a systolic and a diastolic murmur heard over the base of heart. The heart shows marked hypertrophy and dilatation of left side. Mitral valves negative. Aortic valves thickened and insufficient, with some slight calcification of aortic ring. There was marked dilatation of the arch of the aorta.

Discussion by Drs. McPhedran, Parsons, Rudolf, Peters and Hamilton. Dr. Grieg replied.

Timothy Hay Bacillus.

Dr. J. J. Mackenzie read a paper on the above subject (to be published later), and showed by specimens its resemblance to the bacillus of tuberculosis.

Discussion by Drs. McPhedran, Goldie and Parsons.

Arthritis Ossificans (with specimens).

Dr. Rudolf: These specimens appear to be of this nature. I have had them for a couple of years, and always looked upon them as examples of arthritis deformans. An article in London *Lancet*, December 17th, 1898, quotes Dr. Griffiths in *Journal of Bacteriology and Pathology*, for December, 1896, and January, 1897. He gives analytical tables of twenty cases. In none were all the joints affected. The joints became obliterated and the articular ends of bones grew together. Usually the disease begins in early life and is more common in males. Progress is slow, and it takes months or years to fix all the joints of the body. In the subacute form there is swelling and pain. In the chronic form no swelling. In either case the joints are left fixed, but not deformed. Dr. Griffiths concludes that the condition probably commences by the formation of spiculated growths at the articular margins of the bones, which bridge over the cavity and fuse. These marginal growths differ from the "lippings" of rheumatoid arthritis; they arise independently of the articular cartilage, whereas the latter are, as it were, a direct extension of the articular end of the bone. Thus the joints are obliterated centripetally. When fusion has occurred, the external ridges of bone tend to disappear, leaving the external surfaces of the bones smooth and even. The pathology is obscure. Whilst differing from rheumatoid arthritis, the view that it is allied to that disease has some evidence in its favor.

Dr. Primrose asked if this could not result from some injury where passive motion had not been carried out. Dr. McPhedran also discussed the case.

Tuberculous Bone Removed in Excision of Elbow.

Dr. Bingham reported as follows: Patient, male, aged 32. No direct family history of tuberculosis.

History.—Two years ago injury to the elbow, with later ankylosis of joint and pronation of forearm. Rest was tried, but was not successful. At operation the head of the radius was found disorganized, with a sinus leading into the joint. The lower end of the humerus was also badly diseased. The specimens were presented.

Tuberculosis of the Elbow-Joint.

Dr. Peters also presented a case. The patient was a male, aged 23, and had suffered from stiffness of the elbow-joint for thirteen years. There was a history of injury thirteen years ago, and the movements of the elbow had gradually become restricted until at the time of the operation there was not more than 5° movement in flexion and extension, and the joint was quite fixed in a position of pronation. There was some atrophy of the muscles above and below the joint, but very little swelling at the joint itself. On opening the joint the disease was found to be present in the synovial membrane, and also to a slight extent in the articular ends of the bones entering into the formation of the joint. There had evidently been, from time to time, vigorous attempts at repair, as the bones were firmly bound together by somewhat dense fibrous tissue. The Tuberculin R was used in aiding in the diagnosis and gave the characteristic reaction. The microscopic section shows typical tubercular disease both of the bone and the synovial membrane.

Enlarged Cirrhotic Liver.

Dr. McPhedran: R. H., aged 24, admitted October 19th, 1898, died November 29th, 1898. Family history unimportant. Irregular use of spirits (mostly beer) and tobacco; no history of specific infection, no severe illnesses; indoor occupation.

Condition on admission.—Temperature, 104 $\frac{3}{4}$; pulse, 96; respirations, 24. Complained of weakness, loss of appetite, some nausea, but no vomiting; some abdominal pain and pains in the back and legs. No diarrhea. For a month he had had trouble with his eyes, dimness of vision and pain when exposed to bright light. The other complaints had troubled him for a week. Tongue moist, coated in centre, clear at edges. Breath very offensive; heavy, dull expression; respiratory system normal; circulatory system normal. Abdomen: right side more tense than left. Ill-defined tumor in right hypochondriac, right lumbar and umbilical regions. Tenderness in these regions on deep palpation. Percussion note over tumor relatively duller than elsewhere over abdomen. Absolute liver dulness from sixth costal border to one inch below costal margin in mammary line. Liver dulness blended with the dulness of

the tumor. Spleen palpable. Urine gave a marked diazo-reaction; slight amount of albumen, slight amount of bile pigment. Treated with cold baths.

October 23rd.—Abdomen somewhat distended; flanks full and dull on percussion. Fluctuation determined. Deep red papular rash on chest, many papules showing pustulation; back similar; no rash on abdomen. Widal's test tried; no clumping, but marked arrest of motility.

November 1st.—Liver greatly enlarged, from fifth costal cartilage to level of umbilicus in parasternal line; gallop rhythm of heart; signs of edema of lungs posteriorly; purpuric spots on legs; some ascites.

November 3rd.—Became very cyanosed during the course of a bath. Bathing discontinued.

November 4th.—Given supra-renal extract \mathbb{M} x. three times a day. No local reaction. Pulse improved; temperature reduced. Signs of broncho-pneumonia.

November 6th.—Edema of both lungs. Crepitations and cough. Tenderness and friction of perihepatitis.

November 12th.—Crepitations heard in both lungs; deficient expansion. Examination of expectoration: No tubercle bacilli, no pneumococci, no blood. Liver still greatly enlarged; some ascites. Very weak and irritable.

November 21st.—Blood: reds, 4,120,000; whites, 10,000. Chills for first time since baths were discontinued. Evidences of pericarditis. Rash of a petechial character over abdomen, lower thorax and legs. Very weak.

November 29th.—Abdomen greatly distended and tympanitic; liver dulness almost obliterated. Very weak. Died 6.10 p.m.

Post-Mortem (Dr. Goldie).—Examination fourteen hours after death. Nutrition very poor, *rigor mortis* slight, *p.-m.* staining slight. Surface examination, prominent right hypochondriac region. Section: fat small in amount, normal in color; muscle very pale. Abdomen: peritoneum slightly injected, here and there patches of exudate on and between coils of small intestine and over liver surface, fluid in cavity brownish in color; appendix normal, hanging down over rim of true pelvis. Small intestine, small punctiform hemorrhages on serous surfaces, ileum presents non-elevated pigmented areas corresponding to Peyer's patches, only one presents what might be loss of substance. Large intestine, mucous membrane of ascending colon swollen and very red, but no loss of substance; spleen, $4\frac{1}{2}$ oz., small, undefined capsular thickening, pulp dark and normally firm; kidneys, 8 oz., large, firm, but not tense, with many cysts to size of marble, capsule slightly sticky, cortex thinned, pale, cysts even down deep in kidney; right, $8\frac{1}{2}$ oz.,

more cysts, cortex thinner and paler, abscess size of hazel nut with well-marked wall, rough with strands and pits, contents uneven in consistence, no appearance of surrounding reaction; bladder, ureters, etc., negative; stomach and duodenum, negative; liver (was removed without attention to common bile duct): right lobe greatly enlarged, rounded border extending to and slightly beyond umbilicus, left lobe proportionally not so much enlarged, surface fairly smooth but presents many white strands and stars of fibrous tissue, especially on anterior surface of right lobe, weight 6 lbs. 6½ oz., cuts very firm and cannot be broken down with finger, has a yellowish gray color, the lobules are distinctly marked off with semi-transparent fibrous tissue grayish in appearance, vessels of liver normal in size, main hepatic ducts are dilated, an enlarged but soft lymphatic gland ($1\frac{1}{4} \times \frac{3}{4} \times \frac{1}{2}$) lying between greatly enlarged quadrate lobe and hilum and on the junction of dilated common and hepatic duct. The cystic duct is patent, but lumen small, gall-bladder empty and contracted; Pancreas negative; Supra-renals negative, mesenteric glands slightly enlarged but soft, retro-peritoneal glands enlarged and soft. Thorax: Mediastinum, glands slightly enlarged; Pleuræ, visceral and parietal layers present fibrinous exudate patchy in distribution, right cavity contains 7 to 8 oz. of fluid and more than the left, fluid yellowish and cloudy; Pericardium, fibrinous exudate over right ventricle, auricle and on parietal layer opposite, about 3 oz. of slightly cloudy fluid; heart, 8½ oz., muscle pale and very firm, valves good, clots very white, firm and elastic, interlacing with columnæ carneæ and chordæ tendineæ, but not adherent to endocardium; dark clot small in amount, and entirely separate from white clot; walls normal in thickness, coronaries normal and free. Lungs: left, 16 oz., purplish, hypostatic congestion, in lower part of upper lobe and in lower lobe clusters of small abscesses, lobular in distribution, with well-defined, roughened wall, contains thick pus; fibrinous exudate on pleura does not correspond to these clusters, lung tissue does not break down readily, no tuberculous lesions; right, 17 oz., ditto, number of abscesses greater; bronchi contain a little purulent mucus, bronchial glands enlarged but soft. Brain and cord not examined.

Microscopical Examination of Tissue.—Liver: unilobular cirrhosis, connective tissue is not of embryological type but is not adult tissue, between lobules varies in thickness but seems to have no special relation to the vessels or ducts, strands varying in size penetrate the lobules well towards the central vein, and where two or more unite cut up the lobule, beyond this feature there is practically no intercellular fibrosis; bileducts in this tissue appear in great numbers, most are small without apparent

lumen, many are packed with leucocytes, and of these many are surrounded by the same cells, in some are found many bacilli (about the size of bacilli coli communis) even to the extent of plugging, the larger ducts do not present the same exudation of leucocytes around them nor are there a great many in the lumen, the epithelial lining is thrown up in folds; the communication of bile ducts with the lobule can easily be made out, and apparently the bile ducts are partly increased by the marginal liver cells; Vessels, arteries thickened, portal vein apparently no change, capillaries of lobules present proliferation and desquamation of endothelium; liver cell, a very slight granular change, occurring here and there are lobules which at first appear to be necrotic but on further examination liver cells are seen to be greatly altered, pigmented and atrophied, young connective tissue throughout all the lobule, in such a lobule many bacilli are found. Spleen engorged, and shows great desquamation of endothelial cells, a few bacilli were found. Kidney: slight increase of connective tissue. Intestine (pigmented areas): Peyer's patches with congested venules beneath, many of arteries showed great thickening of endothelium and in some cases desquamation, some of the venules were filled with desquamated endothelial cells.

Bacteriological Examination.—Lung abscess: one only showed a mould (undetermined), other gave bacillus pyocyaneus. Pleural exudate; streptococci only growing on first bouillon, no effect on rabbit; bacilli worked out as bacillus coli communis; Pericardial exudate: streptococci only growing on first bouillon, slight pus formation in rabbit but no cocci appeared from cultures of pus; Kidney pus: bacillus coli communis; Liver surface: streptococcus same as above and staphylococcus pyogenes aureus; liver substance: streptococcus same as above and bacillus coli communis; Spleen: streptococci same as above; bacillus: bacillus typhus abdominalis, clumped with blood obtained from patient a week before death, also with blood of undoubted case of typhoid.

Dr. Rudolf, discussing Dr. McPhedran's paper, said: The small spleen looks unlike typhoid fever. The typhoid fever may have been a condition secondary to the low vitality of the patient and the diseased liver.

Vermiform Appendix Removed for Recurrent Appendicitis.

Dr. Peters, in presenting the above case, said: The patient had had some five or six attacks at intervals of about twelve months. Each succeeding attack became more severe, and in the last attack in which I saw him a marked tumor was to be felt in the right iliac and lumbar regions. This was largely made up of fecal matter which was evacuated by purgatives

and enemata, but some swelling remained which was evidently of inflammatory character.

The appendix was removed in a quiescent period. It lay to the outer side of the cecum, and pointed upwards towards the right lumbar region, where it was bound down and partially buried by dense adhesions. It was dissected out and removed in the ordinary way. The organ shows fibrotic atrophy, its coats being thickened and greatly hardened, and the lumen almost obliterated. The mesentery contains an abundant infiltration of fat.

Dry Gangrene of the Thumb due to Carbolic Acid.

Dr. Peters showed a case in which the thumb was gangrenous superficially as far back as the metacarpo-phalangeal articulation. On cutting into it after amputation it is found that the whole of the terminal phalanx, including the bone, is completely necrotic, but the bone of the proximal phalanx has survived, as well as part of the subcutaneous tissue. The skin becomes less and less deeply affected as the hand is approached, showing that the cause of the gangrene is some substance acting from without inwards, and not due to any vascular thrombosis or embolism, nor to any vaso-motor spasm as in Reynaud's disease. The patient gives a history of having scalded the thumb with a mixture of carbolic acid, salt and soap, in June, 1898, and denies any contact with the acid since that date. There is very good reason, however, to discredit that history, and to believe that the poisoning was self-inflicted about ten days before the date of amputation.

Dr. Wm. Oldright, discussing Dr. Peter's paper, had also seen a case where he had to amputate through the middle phalanx of a finger which had suffered dry gangrene from the application of carbolic acid by a druggist.

Dr. Peters also showed an enlarged liver from a male aged fifty-eight years. Patient gave history of failing health for some months. Four weeks ago bronchitis; later, swelling of abdomen. One week ago, $1\frac{1}{2}$ gallons of fluid removed from abdomen. Exploratory incision showed the liver enlarged and slightly and regularly rough; the pancreas was hard and thick. The case was thought to be one of diffuse carcinoma.

The meeting then adjourned.

H. C. PARSONS,

Recording Secretary.

TORONTO CLINICAL SOCIETY.

The fifty-second regular monthly meeting of the above society was held in St. George's Hall, Elm Street, on Wednesday evening, March 8th, at 8.30 p.m., an unusually large number of Fellows being present. Dr. F. LeM. Grasett, the President, occupied the chair.

The following Fellows were present: Drs. Grasett, Peters, Fenton, Primrose, Meyers, Badgerow, W. H. B. Aikins, McCollum, Parsons, Wm. Oldright, McIlwraith, Bruce, Trow, H. J. Hamilton, Thistle, Rudolf, E. E. King, Ryerson, Dwyer, Pepler, Bingham, Chambers, A. A. Macdonald, Cameron, Nevitt, and Geo. Elliott.

Ununited Fracture of Radius and Ulna.

Dr. Geo. A. Peters presented a patient with ununited fracture of the radius and ulna of the right arm, with the following history: Patient was a young man aged 25. Injured in a thrashing machine. His right hand caught under a pulley and wound round the shaft, bending the arm backwards over the shaft. The result was that the ends of the bones were driven into the fascia and muscles. It was properly set at the time on anterior and posterior splints; but the bandages had become displaced in some way, either by the patient himself or the carelessness of some of his relatives. There was a compound injury of both radius and ulna slightly below the junction of the middle with the lower third of the bones; but no comminution. The accident took place on the 29th December, 1898. There is movement of both fragments although there was a good deal of callus thrown out and a fair attempt made at union. The hand is carried somewhat to the radial side. There is some slight shortening. The lower end of the upper fragment of radius can be felt far forward among the muscles, probably having gone in among the muscles and separated them and the tendons. One can place one's finger between the fragments and sink it down to considerable extent. There is not any contact in any part at all. The upper end of the lower fragment of the radius feels sharpened, and one detects with the finger that it is an oblique fracture. There is pretty full power of extension of the fingers. Thumb movements are pretty good, except flexion, which is impaired. Circulation is unimpaired, except so far as it is always impaired after such an injury. There is a certain degree of cyanosis and torpidity in the hand. The nerves are unaffected, except that the little finger is slightly benumbed. Dr. Peters expressed his intention of doing an open operation and dissecting out the bone in front

with the periosteum. Using any such thing as the bone ferrule introduced by Senn Dr. Peters condemned as most unsurgical.

The President, Dr. Wm. Oldright and Dr. King discussed the case. Dr. King described the skiagraph taken that day of the arm. The radius and ulna were fractured about on the same level, and the radius is overlapping antero-posteriorly to the extent of three-quarters of an inch each way. The skiagraph showed the fractures, if any, very slightly oblique. Replying, Dr. Peters said it would not matter if there is half an inch of shortening in the forearm.

Splenic Anemia.

Dr. Thistle presented the patient, a girl 9½ years old. She had been admitted to the Children's Hospital, October 15th, 1898. Family history: Mother and father both living and healthy; also four other children of the family, all healthy. Patient had an attack of measles about four years ago, and has never been sick since, except an occasional headache, until about a year ago, when it was noticed she was of a peculiar color, with occasional headaches. About a month prior to her admission to the Hospital she had vomiting and headaches, with legs slightly swollen. The patient sleeps well. On examination it was noticed she was of a peculiar pallor, a yellowish olive tint. Auscultation of the heart revealed a systolic murmur; and the cardiac dulness was increased. Liver showed no enlargement; while the spleen was decidedly enlarged, extending below the umbilicus, coming almost down to the pelvic crest. There was no change in any other organ, and the lymphatic system was not enlarged in any part. There was no enlargement of the thyroid, the axillary, or the glands in the groin. Occasionally she had attacks of diarrhea. Examination of blood on 10th October: red blood corpuscles, 2,347,000; whites, 13,511. The urine was 1035 sp. gr.; no albumen; no sugar; no bile, although decided jaundice affecting the skin. The spleen has gradually got smaller, and the blood count at the present time is about: red, 3,000,000; white, 20,000. Dr. Thistle arrives at his diagnosis of splenic anemia by a process of exclusion. It is clearly not a leukemia; not Hodgkin's disease because no enlargement of glands; and it is not a pernicious anemia. Charts were exhibited by Dr. Thistle to show the reduction of the splenic enlargement. The treatment was the employment of intestinal antiseptics; large doses of bismuth and small doses of salol combined; also arsenic with the iodide of iron. Bone marrow did not agree with the patient. There was slight elevation of temperature constantly, so that it has been up and down, above 99 degrees, instead of following the normal line.

Abdominal Tumor.

Dr. R. J. Dwyer presented a patient with an abdominal tumor in the epigastric region. The patient was a woman, aged 35, married, born in Canada. Parents: father died at eighty-five; mother at fifty-eight, dropsy. Brothers and sisters all strong and healthy. Has had eight children, two stillborn. Patient has had general complaints of childhood. Her menstruation has always been regular, and there is no history of any stomach trouble at any time previous to the present illness. She is not robust, but has worked hard up to the present time. First indication of present trouble appeared last September. She complained of pains in the stomach passing down towards the pelvis. These pains gradually increased in severity until November, when vomiting commenced. They were relieved by a drink of water. The pains caused her to feel hungry; and there was often a feeling of vomiting without any vomiting being present. By Christmas the patient was not able to keep anything on her stomach. Occasionally a light meal will stay down for half a day, although a test breakfast which was administered was rejected at once. The appearance of the patient is that of one weak and wasted. In the vomited matter there is abundance of mucus, a considerable quantity of lactic acid, but no hydrochloric acid. There is a marked fullness in the epigastric region. Notwithstanding her emaciated appearance she has not the cachectic look one would expect; and her age is against it.

Dr. Nevitt, in discussing the case, said it appeared to be a cancerous growth in the wall of the stomach. Its nodular appearance and its close proximity to the abdominal wall and the escape of gas on pressure all seem to point to the location in the wall of the stomach.

Enlarging on his previous notes, Dr. Dwyer spoke of the character of the peristalsis, and mentioned two distinct points at which gurgling could be obtained. There is no dilatation of the stomach. When the patient takes a full breath you get dulness at the upper border of the growth, and you get the stomach resonance above that. There are one or two nodules present. Dr. Dwyer thinks it probable that she had an ulcer of the stomach and peritonitis, or a tubercular peritonitis. The appearance of the tumor would suggest to him a thickening omentum with possibly transverse colon beneath. As regards the age of the patient bearing on cancer, there have been twenty-six cases of this in St. Michael's Hospital, and one only occurring under fifty years.

Rhinolith.

Dr. Chas. Trow presented a specimen, removed from a female patient, aged nineteen years. There was first a considerable

discharge from the left nostril, with some slight pain, increased on pressure externally, with some headache. Examination of the nose found the middle turbinate moderately thick. The rhinolith was considerably broken in removal. The part, after removal, was cleansed with Seiler's solution and iodol insufflated. The swelling on the outer part of the nose gradually disappeared. These nasal calculi are supposed to be formed by some foreign body becoming impacted in the nostril. As a rule, they are met with singly in adults, and are generally of an irregular ovoid form, the size varying from that of a millet seed to an almond kernel, and weighing up as high as two ounces. There was a high temperature after the operation and much lachrymation before.

Duct Carcinoma of the Breast.

Dr. H. A. Bruce presented the specimen and read the notes of the case. The patient has the following history: Aged sixty-one years. No relatives known to have cancer. The affection of the breast was first noticed about a year ago. There was dull aching pain in the left nipple on retiring one night. She never suffered pain again. Then a small lump beneath the nipple was noticed, which gradually increased in size. The breast gives sensation of weight, but no pain. The nipple was slightly retracted, and the skin immediately surrounding the nipple was adherent to the mass beneath. In size, it was about four inches in diameter, and surrounds the nipple equally in all directions. High up in the axilla there are three enlarged glands to be felt. The operation was performed with solution of cocaine (P. D. & Co.'s tablets—morphia gr. $\frac{1}{4}$, cocaine gr. i., and common salt), and the entire breast removed. The lymphatics leading to the axilla were entirely removed, and a drainage tube placed in the axillary end of the incision. Duct cancer is an exceedingly rare form of the disease. The nipple is usually not retracted, but in this case it was to a slight extent. The disease commences as a malignant papilloma. Into the ducts simple bacillary growths project. These increase and cause discharge from the nipple. The bacillary projections are composed of epithelium.

Malignant Disease of the Breast.

Dr. Bingham presented two cases, with gross specimens, which he had removed from patients whose ages were forty-five and thirty-two respectively. In the first case, there was absolutely no pain whatever, and no retraction of the nipple. A nodular mass was felt below the nipple line, with enlarged glands in the corresponding axilla. It was a five months' growth,

and was found to be firmly adherent to the pectoralis major muscle. In Case No. 2 the period of growth was six months. There was a considerable amount of pain and much trouble from the beginning. In both cases Dr. Bingham removed the lower part of the pectoralis major muscles, and had the glands of the axilla thoroughly cleaned out on account of their being involved very much. He did not touch the pectoralis minor. The point he would like to hear discussed was the advisability of removing the pectoral muscles. He was entirely prepared to say that the pectoralis major should be removed in all cases in which we operate. In all cases where we deal with malignant disease of the breast, we may have infection of the axillary spaces without any evidence of adhesion. Another point in reference to the method of removal which he thought of some interest—we should attempt to remove, as far as possible, the muscular layer and the growth in one mass without separation, or without cutting into the diseased tissues at any point.

GEORGE ELLIOTT,

Recording Secretary.

Editorials.

PURE WATER.

According to the latest information at hand we learn that chemically pure water is poisonous to human beings. One of the purest waters that Nature furnishes is that from natural ice, such as melted ice of the glaciers. It is generally recognized as a fact in mountainous districts that it is dangerous for tourists to quench their thirst with melted snow and ice in high altitudes. Some may be surprised to find that the danger connected therewith is due to the purity of such waters. We learn these things from Hans Koeppe, who discusses the subject in the *Deutsche medicinische Wochenschrift* (September 29th, 1898), as mentioned in an editorial in the *Medical Register* (February 15th). Dr. Koeppe also tells us a few other things about pure and comparatively pure waters. Distilled water is not so pure as the glacier ice water, but it is sufficiently pure to do much harm when taken into the human system. Absolutely pure water contains no dissolved salts or gases. Distilled water is an "active protoplasmic poison, due to its property of extracting salts from animal tissues, and causing them to swell up by imbibition. When taken into the stomach it causes swelling of the epigastric epithelium, which is followed by desquamation and the production of catarrhal inflammation. The practice of washing out the stomach with distilled water is condemned, but were it possible to obtain a really pure water the procedure would be even more injurious." Dr. Koeppe gives an interesting proof of his contentions by citing the instance of a spring at Gastein which has been known for centuries as the Giftbrunnen, or "poison spring." Numerous chemical analyses have shown that the water is wonderfully pure, more so even than distilled water, hence the danger in drinking it. These statements are of great practical importance in view of the fact that distilled water is now used to such an extent for drinking purposes. The *Register* suggests that when taken at ordinary meals it might be harmless

on account of mixing with salts in the food, and that when taken between meals it would be quite safe if a little saline material were added.

SMALLPOX AND VACCINATION.

During the last few weeks some unpleasant rumors about the prevalence of smallpox in the United States have been in the air. Dr. Reynolds, the Commissioner of Health in the city of Chicago, in a letter to the public, issued about February 1st, said: "Smallpox is spreading throughout the world to an extent not equalled since 1893. *Public Health Reports*, the official organ of the Marine Hospital Bureau, our national health service, records the recent invasion of nineteen States and sixty-three localities by the pestilence in this country alone, and the newspapers add daily to the number. When the contagion becomes so widespread as it now is, it is obviously impossible to prevent its introduction into a new city like Chicago, with its numerous means of communication with the rest of the country."

The *Buffalo Medical Journal*, in commenting on the prevalence of smallpox in the State of New York, says that the ordinary health reports give but a very inadequate idea of the extent of the disease, which has invaded a large number of districts, including some that are close to our own Province. The law as it stands at present in England makes primary vaccination compulsory, while revaccination is entirely voluntary. It was hoped that some change would be made in the statutory regulations this session, but in answer to an inquiry Mr. Balfour stated that the Government do not propose to introduce any legislation regarding vaccination during the present session. In Germany vaccination is obligatory in the first year of life, and revaccination in the tenth year. The result of the enforcement of this law was remarkable. With a population of 50,000,000 there were, in 1871, 143,000 deaths from smallpox; last year there were only 116 deaths from smallpox.

Are we becoming careless about vaccination in this country? If so, the prevalence of smallpox in the neighboring Republic, and especially in the States close to Canada, should be considered by our legislators and citizens a grave danger signal.

There are children now attending some of the schools in Toronto who have never been vaccinated, and have never been questioned about the matter. Vaccination with ordinary aseptic or antiseptic precautions is perfectly safe. The following simple rules should be carried out: Let the surgeon have clean hands and a clean scarifier, with the skin of the patient perfectly clean at the seat of vaccination; use only modern glycerinised lymph.

MEDICAL ITEMS.

Lord Lister has been appointed a Foreign Associate of the Paris Academy of Medicine.

Dr. Marie J. Mergler has been elected Dean of Northwestern University Woman's Medical School, in place of Dr. I. N. Danforth, resigned. Dr. Danforth has been elected Dean Emeritus.

Dr. George H. Simmons, of Lincoln, Nebraska, formerly editor of the *Western Medical Review*, has been elected editor of the *Journal of the American Medical Association*, in the place of the late Dr. J. B. Hamilton.

"We are pleased to note that the efforts of Dr. Price-Brown, of Toronto, Canada, will shortly be rewarded by the completion and publication of his work on 'Diseases of the Nose and Throat.'"—*Laryngoscope*, March, 1899.

Cooke's School of Anatomy, Physiology and Operative Surgery was reopened on Tuesday, February 14th, and it will be carried on in future according to the methods so successfully initiated by the late Mr. Thomas Cooke, F.R.C.S.

Aguinaldo, the Filipino patriot, is a Spanish half-breed. At the age of fifteen he commenced the study of medicine in Manila, and afterwards continued his studies at Hong Kong. He was remarked for his ability as a student, but whether he graduated or not is a matter of doubt.

THE MEDICAL AND SURGICAL "REVIEW OF REVIEWS."—This journal is published after the plans and methods of Stead's *Review of Reviews*, but deals exclusively with medical subjects. Its chief object will be to summarize and index the principal contents of the medical journals of each month, and also to publish occasionally original papers dealing with the questions of the day. We are glad to be able to express a positive opinion that it is in all respects a most admirable journal, and ought to be (as we are sure it will be) very highly prized by the general practitioner.

Personals.

Dr. J. E. Graham has returned from his trip to the Southern States greatly improved in health.

Dr. J. T. Fotheringham, of Toronto, returned home March 16th, after spending a short holiday at the Gleason Sanitarium, Elmira, N.Y.

Dr. Thomas McCrae (Tor. '95) spent a few days recently in Toronto, and left, March 25th, for Germany, where he will spend about six months in the study of Pathology. In the fall he will return to Johns Hopkins Hospital and resume his work in clinical medicine.

Dr. J. T. Fotheringham, of Toronto, and Dr. Ingersoll Olmsted, of Hamilton, are the latest additions to the staff of the CANADIAN PRACTITIONER AND REVIEW.

We learn with regret that Dr. James Fulton (Trinity, '76), of St. Thomas, was seriously injured by a runaway accident, March 21st. His carriage collided with a hydrant, and the doctor was thrown against the stone curb. There was an extensive scalp wound and slight (it is hoped) concussion of the brain.

We have to announce with regret that Dr. Neil McPhatter (Trinity, '80), formerly of Guelph, Ont., was seriously injured at the recent disastrous Windsor Hotel fire, New York. He very heroically endeavored to save two women, Mrs. (Dr.) Henry, and Mrs. Price, by lowering them down a rope. One was killed, the other was seriously injured. The doctor then went down the rope himself, but after his hands had become seriously lacerated, he fell a considerable distance, and had both legs broken.

Dr. L. F. Barker (Tor. '90) was in Toronto, March 21st, but only remained a part of the day. He and Dr. Flexer, with two assistants, have been sent to Manila, in the Philippines, by the Medical Faculty of Johns Hopkins University to study tropical diseases as found in these Eastern islands, lately acquired by the United States. Dr. Barker left Toronto for British Columbia on the evening of the 21st, and the whole party sailed from Vancouver, March 27th. They expect to return in about six months.

Progress of Medical Science.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Treatment of Hay Fever with Supra-renal Capsules.

S. Solis-Cohen (*Philadelphia Med. Jour.*, August, 1898) gives a preliminary note upon the subject. The attacks are neither hysteric nor hypnotic, but are due to congenital weakness of vaso-motor control. They are not due to lithemia. The usual remedies have been used with some degree of success, but supra-renal extract in tabloid form has been of the greatest value. One 5-gramme tabloid is taken five times a day; sometimes, if the attack of sneezing was severe, two were taken at a time, and one was always taken at bedtime, and thus a "sneezeless, coryzaless night" was insured. The effect is attributed to the power possessed by supra-renal preparations, to raise blood pressure by increasing vascular tone, and so contraction of the nasal mucous membrane is brought about.

X-Ray Photograph of a Silver Tube in the Antrum of Highmore.

Mr. Cheatle (*Jour. of Laryng., Rhin. and Otol.*, February, 1899) reports the case. The patient was wearing a tube through the canine fossa for chronic antral suppuration. The top broke off, and the patient continued to wear it. One morning, on waking, it had disappeared. In order to see if it was inside the antrum, Mr. Low took the photograph, which clearly showed it lying across the cavity.

Dundas Grant also recorded a case in which he found a vulcanite tube lying in the antrum. It had broken off the plate, and was lying there unknown to the patient.

Watson Williams cited a case where a peg was similarly lost in the antrum. In this case, however, it passed out through the ostium maxillare without operative interference.

William Hill recorded another case, in which the loss of a tube in the antrum was fortunate for the patient, as it necessitated the opening of the front wall of the sinus, which proved to be diseased. The result of the treatment was a perfect cure.

The abstractor might relate a somewhat peculiar case of a similar character. His patient was a young man of a very tuberculous family. When operation for antral disease became

necessary, he declined to have a tooth extracted, and a silver tube was inserted through the canine fossa. For three years successive tubes were worn without effecting a cure. Then a tooth was extracted, and a hole drilled through the alveolus. As hard-wood plugs had answered well in previous cases, one was placed in position in this. The patient was instructed how to make them when required, the two points, *of fitting tightly and being tapered*, being insisted upon, the plug being removed only for the purpose of irrigation. As for years he had managed the irrigation treatment himself, he did not return to the office again for some time. When he did come back he had a doleful tale to tell. Two nights previously he had put in a large new plug. He said it was a very tight fit. When he awoke in the morning it was gone. He passed in a probe to ascertain if he could feel it, but could not. Then he washed out the antrum as usual through the alveolus, and arrived at the conclusion that he had swallowed the plug. He at once made another one, even larger than the first, and put it tightly in. The next morning, when he first woke, he could feel it deeper in the socket with his tongue. Then he went to sleep again, and when he arose an hour later it, too, was gone. Chloroform was administered, the opening in the canine fossa enlarged by hammer and chisel, and two long, large and smooth plugs removed. They were not *tapered*, however, but perfectly straight.

Tumors of the Naso-Pharynx.

John R. Winslow (*Jour. of Eye, Ear and Throat Diseases* October, 1898) says: "In the matter of treatment, with the possible exception of symphysiotomy, there is no more horrible operation than temporary resection of the upper jaw, as practised by Langenbeck and others. Unfortunately, these dangerous and disfiguring operations are attended with no greater success than simpler measures. Case after case is on record of recurrence even of non-malignant growth, in spite of such so-called 'radical procedures.'"

Modern treatment has practically narrowed down to four methods, which are stated in order of preference: 1. Snare, either cold or by electro-cautery. 2. Electrolysis. 3. Doyen's method of rapid enucleation. 4. Electro-cautery dissection. The relative merits of these different methods are a subject of much dispute.

A Fatal Case of Pharyngeal Hemorrhage.

G. E. Brewer (*Yale Med. Jour.*, December, 1898) describes the history of the case. It occurred in a young man aged 25, from a comparatively insignificant wound, probably occasioned

by the rupture of a small abscess upon the posterior surface of the soft palate. He first complained of sore throat. There was difficulty in swallowing and the left tonsil was red and swollen. There was also moderate edema of palate and uvula. In a day or two there was rupture of the supposed abscess of tonsil, followed by slight bleeding. Small hemorrhages occurred from time to time, and then the pain and swelling subsided. Later a hemorrhage occurred which resulted in syncope. From this, he rallied, with a slight feeling of soreness in left side of throat. On examination the left side of palate was thickened and presented a small clot upon its posterior surface. Two other similar hemorrhages occurred, the last one resulting in death. The author is of opinion that ligation of the common carotid would have saved the patient.

Voice from a Medical Standpoint.

H. D. Hamilton (*Montreal Med. Jour.*, February, 1899) draws attention to the accessory parts of the body concerned in voice production, as the thorax, lungs, resonance chambers of the nose, the ear and the cranial cavities, wisely insisting that to obtain the musical voice in its perfection, the whole body should be in a condition of perfect health. Faulty methods of vocalization and overstrain of the voice are likewise to be avoided.

Wesley Mills, speaking upon the same subject, and in the same journal, suggests that voice might be an indicator of disease, just as the face is, particularly in reference to the pitch and the qualities of sound. Those who sing should be warned against using the voice during the change of life. Singers in societies often strain the parts, producing congestions and exhaustion of the nervous system, from attempting a range beyond their power. He speaks of the frequency of voice troubles among preachers and their rarity among actors—the former being caused by the high pressure, worry and irregularity of their work; the latter being the result of regularity in the use of the voice, and control of it by the principles of common-sense.

Tracheotomy in Tubercular Perichondritis.

Herr Nauratil (*Monatschrift f. Aehrenheilkunde*, July, 1888): A charwoman, aged 32, six months pregnant, was admitted to the hospital in a state of suffocation from swelling of the false cords and ary-epiglottic folds. Tracheotomy was done at once. There was catarrh of both apices and some dulness. In three weeks swelling subsided and she went out, wearing the tube on account of her approaching labor. Two months after confinement she returned with her larynx perfectly sound, except for

slightly impaired motility of one arytenoid. The case shows the possible value of tracheotomy as a curative measure in tubercular peri-chondritis, without extensive lung disease.

Treatment of Laryngeal Phthisis.

R. Lake (*Jour. Laryng., Rhin. and Otol.*, February, 1899) says that while "general treatment is useless, one must not lose sight of the enormous aid one derives from increasing the powers of resistance in the body, and by increasing the numbers and energy of phagocytes and white corpuscles." Local measures he divides into surgical and non-surgical. The former consist in removing diseased portions, curetting ulcers, and depleting edematous tissues by puncture, etc. The latter consist of insufflation of powders, painting on or rubbing in of solutions, the injection into the tissues of hypodermic remedies, and the injection into the trachea of oily solutions by syringes and atomizers. In using any "paint" to the larynx a brush should never be used, but always a cotton wool mop, for the two reasons of cleanliness and efficiency. Brisk and firm friction are required, and all solutions should be as strong as possible. When injections are given the temperature should be about 80° Fah., the patient being instructed to inhale deeply, hold his breath immediately after the injection, and not to cough. The conditions attending laryngeal tuberculosis are divided into six clinical heads. 1. Granular condition of vocal cords. 2. Superficial excoriation or ulceration. 3. Edema. 4. Edema and superficial ulceration. 5. Deep ulceration. 6. Mixed edema and deep ulceration. In Nos. 1 and 2 no method of treatment has been so efficacious as intratracheal injection. In Nos. 3 and 4 surgical treatment is required as well as the application of paints. Cutting forceps do the most effective work. Formic aldehyde, or lactic acid, should be used after every intra-laryngeal operation on a tubercular subject, no matter how small the operation. In Nos. 5 and 6 frictions and operations are useless as well as intolerant to the patient. In such cases insufflations of iodoform and orthoform will have a wonderfully soothing effect, particularly the latter, which is noted for its prolonged action. It is a non-toxic anodyne, producing anesthesia of the parts for nearly twenty-four hours. The prognosis, under judicious treatment, is good under the first two divisions, fairly good in some of the third and fourth varieties, and universally bad in the other two.

Foreign Bodies in the Lung, One for Eight, Another for Five Years, Simulating Tuberculosis.

M. A. B. Smith (*Maritime Med. News*, January, 1899) reports the case of a young man who accidentally drew the head of a

piece of timothy into his larynx, producing symptoms resembling those of tuberculosis, which lasted for eight years. When the accident occurred severe coughing with some expectoration of blood followed. After this, off and on for years, he had similar attacks, in which particles of timothy would be expectorated. Sometimes also severe hemorrhages would occur. On two occasions he spat up each time nearly a quart of blood. Eight years after the accident, a number of particles were spat off while the doctor was present. These were examined under the microscope and found to be identical with those from a fresh timothy head. The patient subsequently materially improved in health.

D. A. Campbell (*Maritime Med. News*, January, 1899) reports a similar case. A young man while walking through a meadow, amused himself by biting off the heads from the stalks of timothy. One of these slipped into his larynx. He was not affected much immediately, but hemorrhages developed, occurring off and on for five years. Finally the head was brought up almost unchanged.

Carcinoma of the Esophagus with Fatal Hemorrhage from the Subclavian Artery.

F. G. Finley and D. P. Anderson (*Montreal Med. Jour.*, February, 1899) give the history of a man, aged 60, addicted to chronic alcoholism. Swallowing had been difficult for some time and he had been hoarse likewise. Subsequently he was examined by Birkett, who reported complete paralysis of left vocal cord and deficient adduction of the right. No. 8 esophageal sound was arrested $13\frac{1}{2}$ inches from mouth, but No. 7 passed into the stomach. Four months later a No. 3 esophageal sound was arrested 8 inches from the mouth. As the symptoms became more severe, there was evening rise of temperature, dull pain over the sternum, cough with scanty and fetid expectoration, rigors, etc., with extreme emaciation. Finally a slight attack of coughing was followed immediately by profuse hemorrhage and death. *Post-mortem* revealed cancer of the esophagus above the bifurcation of the trachea and extending to the left. There was gangrene of the left lung and perforation of the second portion of the subclavian artery $2\frac{1}{2}$ inches from its origin. There was also broncho-pneumonia and secondary growths in tissues of neck and epigastric glands.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

The Thyroid Therapy.

The *Northwestern Lancet* has in it an article on Thyroid Therapy by Haldor Sneve. The conclusions which he reaches are as follows:

1. The thyroid gland produces a secretion of the greatest importance to the metabolism of the body. Absence of function produces cretinism if congenital, myxedema if acquired.

2. Simple hyperplasia (simple goitre) does not produce marked pathological disturbances, but the writer believes it to be a larvated form of exophthalmic goitre, and that so-called "nervousness" can be found in the vast majority of cases.

3. Hyperplasia associated with disturbance of the cervical sympathetic is the disease known as exophthalmic goitre.

4. Surgical interference in diseases of the thyroid gland should be limited to the removal of neoplasms; thyroidectomy in exophthalmic goitre is unphysiological, irrational and dangerous.

5. In the majority of cases of exophthalmic goitre, medicinal hygienic treatment, rest, galvanism through the neck (two to five milliamperes), tonics, sodium phosphate and thymus gland will effect amelioration. In cases refractory to medical treatment where life is threatened, section of the cervical sympathetic should be practised.

6. Many cases of neurasthenia are cases of masked exophthalmic goitre and should be treated accordingly.

7. Thyroid therapy is specific in sporadic cretinism, myxedema, and simple goitre, and removes obesity.

8. Thyroid extract increases the unpleasant symptoms in exophthalmic goitre, and is a reliable test also in the masked form of this disease.—*Therapeutic Gazette*.

Treatment of Ulcer of Stomach.

Ewald (*Brit. Med. Jour.*, October 29th, 1898) writes upon the treatment of several diseases of the stomach. His treatment of recent ulcer is briefly as follows:

The patient is kept absolutely at rest in bed, and for five or six days nourished on nutritive enemata. The thirst is relieved by pellets of ice, and if hunger is excessive, small doses of cocaine may be given. Pain is generally quickly relieved by this method of treatment, but if not, morphine may be given, and is best administered hypodermically in the region of the stomach. After three to six days, according to the clinical symptoms and

condition of the patient, teaspoonfuls of some easily digested food, such as milk gruel of wheat or oats, are given, and if this causes no pain the quantity is gradually increased and the number of nutritive enemata decreased. As a rule, in a few days the patient will be able to take a light diet of non-irritating fluids and soft solids.

Formalin for Sweating Feet.

Gerdeck (*Riformo Medico*) recommends formalin in sweating feet. The sole but not the dorsum should be painted with pure formalin three times a day, and the region between the toes once a day. Four or five drops of the drug may also be applied to the shoe, as it serves to disguise the fetid odor, as well as to preserve the leather. When the pure formalin cannot be tolerated a 30 per cent. solution may be employed. The good effects last for three or four weeks, when the treatment may be repeated. Under the applications the skin becomes dry and leathery.—*University Medical Magazine*.

Sodium Sulphate in Chronic Mucous Catarrh of the Stomach.

Simon (*Jour. de Médecine de Paris*) has employed sodium sulphate in several diseases of the stomach. He found that it gave good results in chronic mucous catarrh with hypochlorhydria, but was of no avail in gastralgia, atropic gastric catarrh, and carcinoma. Simon gives the drug in 10 to 15 grain doses, dissolved in 6 or 7 ounces of lukewarm water, before breakfast. He attributes the good results to stimulation of acid secretion and the motor function of the stomach.

Two Cases of Carbolic Acid Gangrene.

Steinmetz (*Therap. Monatsh.*, September, 1898) reports a case of gangrene of the finger following the application of a dressing moistened with an 8 per cent. solution of carbolic acid. On the first morning after the dressing was applied the finger was white, and on the second the tip was black. On the seventh day the distal half of the finger was dry and black. Amputation was performed on the sixteenth day.

In the October (1898) number of the same journal Havemann records a similar case of gangrene of the thumb following the application of a dressing moistened with a 3 per cent. solution. The skin was dry and black, similar to that of the former case.

The Influence of Formaldehyde upon Digestive Ferments.

Finossier (*Revue de Thérapeutique Médico-Chirurgicale*) gives the results of several interesting experiments upon this

subject. He finds that it only slightly retards the action of ptyalin and amylopsin, whilst considerable delay occurs in proteid digestion by pepsine and trypsin, but was not sufficiently marked to prohibit its use as a gastric or intestinal antiseptic.

The Use of Bicarbonate of Soda in the Treatment of Suppuration.

Brucker (*Thèse de Bordeaux*) states that he has obtained good results from the treatment of wounds by the application of absorbent cotton or lint moistened with a 2 per cent. solution of bicarbonate of soda. He sometimes uses a 1 in 25 ointment of vaseline. He believes that the success of the treatment depends upon rendering the serum more alkaline and not upon the antiseptic power of the drug, as strong solutions do not act any better than a 2 per cent.

Hay Asthma.

In cases of hay asthma, with cough and difficult expectoration following exposure, give:

R	Ammon. chlorid	3 iv.
	Tinct. hyoscyami	} āā 3 i
	Syr. scillæ comp.	
	Syr. senegæ	
	Syr. tolutanæ	
M.	S. Teaspoonful every three hours.	

—DR. ESHNER.

The Treatment of Recurrent Epistaxis.

According to the *Riforma Medica* for January 10th, Rendu recommends:

R	Antipyrine	7½ grains
	Tannin	15 "
	Powdered sugar	150 "

To be used locally.

Belladonna in Broncho-Pneumonia in Children.

The *Brit. Med. Jour.* of January 28th, 1899, contains an article on this subject by Coutts, Physician to the East London Hospital for Children. He says that he was led to try the remedy from the fact that it had been found most useful in paralysis of diaphragm following diphtheria, and also in the bronchitis with excessive secretion which sometimes follows ether anæsthesia. Several dozen cases have been treated by this method, and, so far, the mortality has been greatly reduced. Coutts gives the remedy in large doses— $\frac{1}{4}$ grain of the alcoholic extract every four hours—and makes

no distinction for age. The efficacy of the treatment no doubt depends upon stimulation of the respiratory centre and diminution of the bronchial secretion.

Pernicious Anemia and Pseudo-Leukemia.

In cases of this kind inject liquor potassæ arsenitis in aq. laurocerasi. Or, since considerable local irritation or pain may be occasioned, it is better to use arseniate of sodium in water.
—VINAY.

Headaches.

℞ Sodii brom.....	℥i.
Phenacetin.....	gr. xxx.
Caffein. citrat	gr. xvij.
Sodii bicarb.....	℥i.

M. et ft. chart. No. vi. S. One every fifteen minutes till relieved, to be followed by a Seidlitz powder.

—DR. M. STALLER.

Acute Colic.

℞ Tinct. opii deodorat	℥i.
Chloroformi.....	℥iss.
Camphoræ	gr. iv.
Ol. cajuputi.....	℥i.
Aquæ	℥ij.

M. S. One teaspoonful every hour.

Neuralgia.

℞ Menthol	} āā 1
Guaiacol	
Spt. vini rect absol.....	18

Vaginismus and Vaginitis.

℞ Ol. eucalypti	℥iij.
Ceræ albæ.....	} āā ad ℥iij.
Olei theobromatis.....	

M. Div. in supposit. No. iv. (bougie-shaped).

—LUTAUD, *Jour. de Méd.*

—*Medical Record.*

CLIMATOLOGY AND PUBLIC HEALTH.

IN CHARGE OF WM. OLDRIGHT, M.A., M.D.

Pavements, slaughter-houses and tuberculosis come under the above caption at the present time; and in our sanitary section of this and forthcoming issues will be found some clippings dealing with these subjects, in which so many of our readers are interested. We (not the editorial "we" alone) are now getting thawed out so far as to be fondly hoping we are quite near the time when we shall be—rolling through the mud, and then enjoying good (?) roads and the balmy breath of spring. In our provincial, municipal and other deliberative bodies people are discussing the problem of "mending our ways," and so we make a few cuttings *apropos* thereof from the *Sanitarian*. The first of these is from a paper read before the Association of Medical Health Officers, by A. W. Campbell, C.E., Provincial Road Commissioner for Ontario. We are pleased to see "the prophet is not without honor" in another country and gladly re-import him. His article is entitled "The Influence of Pavements on Public Health." Amongst other things he says:

"There is no one paving material which possesses every quality desired in a pavement to meet all conditions and uses. The ideal pavement remains to be discovered; but the features which should belong to such an ideal pavement are so numerous and of such varying character as to render the search apparently a hopeless one. The ideal pavement: 1, should be cheap and economical of maintenance; 2, should be durable; 3, should suit all classes of traffic; 4, should offer little resistance to traction; 5, should give a good foot-hold to horses; 6, should be adapted to all grades; 7, should have a good appearance; 8, should not be muddy nor pervious to water; 9, should be sanitary, that is, non-absorbent, not subject to decay, easily cleaned, not dusty, not noisy. . . . Just as no absolutely perfect paving for every time and place has been discovered, it is doubtful if any paving material now used should be utterly condemned. Each has its place in which, until the ideal universal pavement is found, it will be more satisfactory than any other which could be used under that particular set of circumstances of soil, climate, traffic, etc. . . . Cedar block has received the greatest censure on the score of unhealthfulness. The late Dr. O. W. Wight, Health Officer of Detroit, is quoted as saying: 'On sanitary grounds I must earnestly protest against the use of wooden block pavements. Such blocks, laid endwise, not only absorb water which dissolves out the albuminoid matter that acts as a putrefactive leaven, but also absorbs an infusion of horse-manure and a great quantity of

horse-urine dropped on the street. The lower end of the blocks, resting on boards, clay or sand, soon becomes covered with a fungoid growth thoroughly saturated with albuminous extract and the excreta of animals in a liquid, putrescible form. These wooden pavements undergo a decomposition in the warm season, and add to the unwholesomeness of the city. The street, in fact, might as well be covered a foot deep with rotting barnyard manure so far as unwholesomeness is concerned. Moreover, the interstices between the blocks and the perforations of decay allow the foul liquids of the surface to flow through, saturating the earth beneath, and constantly adding to the putrefying mass.' Cedar block has been condemned in similar terms by many others. On the other hand, Col. Heywood, Engineer of the city of London, England, has said: 'It has been said that wood pavements at all times smell offensively and may be unhealthful; but although some city streets have been paved with wood for thirty years, no complaints that I am aware of have been made to the commission on this head, and the inhabitants at all times have not only expressed great anxiety lest the wood should be replaced by other materials, but have subscribed towards the cost of its renewal. . . . I have at times noticed offensive emanations from it near cab-stands, but am unable to find further evidence of its unhealthfulness. These remarks must be held to apply only to public streets open to the sun and air, and traffic; in confined places and under some conditions, wood might be objectionable. I have seen it decay in confined places without traffic.'

"The one statement by the Medical Health Officer of Detroit refers directly to the cedar block pavement as we understand it in this country. The other opinion, that of Colonel Heywood of London, is expressed regarding the wooden pavement as laid in European countries. Between these two pavements there is a vast difference. Under European practice, many of the pavements are of the Karri and Jarrah woods of Australia, which are thoroughly saturated with resins, are very hard and are not subject to decay. They are sawn into brick-like blocks and laid on concrete. Where soft woods are used, they are also cut into regular oblong blocks and laid on concrete, and are saturated with creosote or treated with some other preservative process. Wooden pavements of America, however, represented by cedar blocks, are of a very different order."

Then follows a very practical consideration:

"From a sanitary standpoint, the cedar block pavement of this country would indicate a serious menace to health. At the same time, while we are justified as a matter of theory in arriving at this result, there do not appear to be any statistics to prove the conclusion to be a correct one. The death-rate of

cities most largely paved with cedar block does not bear any ratio to the extent of such pavement; nor does a change from cedar block to another less absorbent pavement produce a noticeable effect on the death-rate."

Next, bacteriology is again to the fore:

"The bacteriological examinations showed that, in specimens taken from blocks which had been in use for four years, and from a depth of one centimetre and two centimetres below the surface, there were at the end of five days 650,000, 220,000 and 12,100 bacteria per gramme of wood. A later examination showed 1,200,000 colonies per gramme in the surface of the wood, and 8,600 colonies per gramme at two centimetres below the surface. An estimate, in terms of its nitrogen, was made of the organic matter absorbed by the wood, and indicated that the surface layer of wood contains more nitrogen than the most polluted soil. A comparative estimate of the pollution of the atmosphere was made by placing a definite quantity of sulphuric acid under a glass bell, on the surface of wooden and asphalt pavements, the result, as indicated by the quantity of ammonia absorbed by the acid, being much in favor of asphalt. The observations show that while a wooden pavement gives absolute protection to the soil and to the sub-soil water, there was considerable atmosphere contamination."

Then other forms of pavement are discussed:

"Broken stone or macadam would next arouse suspicion with regard to its absorptive qualities. There is this great difference between the two, however, that whereas a wooden pavement itself decays and affords food for the decay of other organic matter falling on it, the macadam does not in itself decay. With under-drainage such as well-built macadam roads possess, it should be little more than a good sewage disposal bed for the comparatively small amount of sewage which falls upon it. A macadam pavement can be scraped and swept, it is not noisy, dust can be subdued by sprinkling, and on sanitary grounds appears to be an excellent pavement for residential streets where traffic is not excessive. For business streets or for heavily travelled thoroughfares of cities, a harder surface is advisable.

"With regard to absorption, there can be no objection to asphalt, vitrified bricks nor stone blocks. Asphalt is impervious to water; while the joints of brick or stone pavements are practically perfect so far as absorption is concerned. To be sanitary a pavement should not be dusty. The dust of a pavement is not only an irritant, but carries with it the bacteria of disease which, from various sources, are a part of street filth. To prevent dust the pavement must be so perfectly cleaned that a practically harmless amount is taken up by the wind; or if perfect cleanliness is not possible, dust must be subdued by sprinkling. Un-

less perfectly cleaned, much better cleaned than is commonly the case in this country, an asphalt pavement is very apt to be a disagreeable dusty pavement on a windy day in summer. This, indeed, is one of its greatest faults from a sanitary standpoint. Toronto has the reputation of being a clean city, with a well-organized street department; yet even under these favorable conditions, a walk or drive down Yonge Street on a warm, windy day is a very trying experience. The smooth, hot surface quickly dries any matter falling upon it, a wheel passing over this dry substance grinds it to powder, and the result is that clouds of dust find their way into the eyes, nose, mouth, throat and lungs of pedestrians. Business men in their offices are not safe from its attack, as it drifts in through the open windows. The dust imbeds itself in clothing, fastens itself on articles of food exposed in the shops, to be eaten finally by the purchaser. One case came to my notice in which a consumptive patient was ordered by his physician to leave one of the best residence streets of Toronto, because of the dust which came from the asphalted roadway. These streets are swept by machines, and are hand-swept by a corps of city employees, but are not, to my knowledge, flushed as are similar pavements in London and Paris. Flushing is the only method whereby asphalt can be freed from this unsanitary dustiness, but in addition to being expensive and hurtful to the asphalt, such a proposal will doubtless meet the disapprobation of the engineer in charge of sewers. The dust, however, is not a defect of the pavement so much as it is a fault in the method of cleaning. Asphalt has, nevertheless, the disadvantage of being a very hot pavement. Its smooth surface reflecting back the heat and light, is productive at times of sun-stroke, and the glare is frequently painful to the eyes. This is most noticeable in closely built business sections where there is least circulation of air, where the sun beats down between high brick walls; and is not so objectionable on a shady residential street with houses well apart. Vitrified brick and stone block pavements are neither so dusty nor hot as asphalt since the surfaces are less smooth and assist in retaining in the joints the finer particles of dust. Sprinkling, too, is in a greater measure effective in subduing dust on brick or stone block than on asphalt, from the hot, smooth surface of which moisture evaporates rapidly. A macadam pavement is dusty if not properly treated, but if scraped and swept as are other pavements, the dust can be largely subdued by sprinkling."

Then, turning from features of pavements which are violations of sanitary conditions when viewed from a chemical and bacteriological standpoint, there comes a matter of sanitation that is too constantly overlooked—the want of thought practically for the abused nervous system.

"Noisiness, if excessive, is another unsanitary feature. A noisy pavement is jarring to the nerves, grating upon the sensibilities, and for either a heavily travelled business street or a residential quarter, a quiet pavement is much to be desired. Noise itself is not always unhealthful. It is doubtful if the workman in a boiler factory, or a railroad engineer or other employee, is much influenced by the noise incidental to his occupation. Both are muscular of body, constantly taking vigorous exercise. But to the more sedentary man of business, whether at high nervous tension in his office or resting in the quiet of his home, a din, constant or intermittent, is a source of annoyance, and as such is wearing on the nervous system. The most objectionable in this regard is granite or other stone block pavement. Vitrified brick is apt, unless great precautions are taken, to create a disagreeable rumbling. Asphalt, wood, and macadam are the least objectionable with respect to noise."

And finally, a little bright gleam athwart our smoky pathway :

"Streets should be the public parks, pleasing to the cultivated taste, adding to the culture and refinement of the people, and enticing them to breathe health and vigor, whether walking, bicycling, riding or driving. Passing along the city street we reach the country highway, which, as a means of permitting the people of the city to leave the congested portions and to reside in the less thickly populated suburbs, forms an important factor in securing public health."

From another source we note that in Lyons, France, a substance called ceramo-crystal, ceramic stone or devitrified glass, is being used as an experiment in street paving.

WHEELMEN AS BENEFACTORS.

From the *Baltimore Sun*, through the *Sanitarian*, we also find something on the same subject under the above heading :

"There is no public institution more potent in social, political and commercial well-being than the public highway. . . . Banded under the banner of the League of American Wheelmen, the riders of the tireless tire have, since their organization in 1880, raised the cry of 'good roads,' and have kept it up with wondrous energy. They have not only through their engineers devised or selected the best methods of making the cheapest durable thoroughfares, but they have conquered many obstacles that have stood between them and other groups of persons who are to be benefited equally with them in securing smooth roads. . . . The State aid system, as shown in the resolutions, recites that the cost of construction of first-class roads connecting farms with market towns is too considerable to be borne by farm

property alone : that as the entire population is benefited directly and indirectly by good roads, all property ought to contribute through the medium of a State tax. The Higbee-Armstrong law, by which State aid has been introduced in New York, is popular. It provides for a division of the cost of road construction among the State, the county and the local township, and it is said, many of the towns availing themselves of it will secure from outside sources four or five times the sum they raise themselves, while in the large cities, which will pay most of the fund, the tax will not fall more heavily than 1 per cent. per thousand dollars of the assessed valuation."

The Administration of Somatose.

Joachim (*Pharm. Zeit.*) has found that patients are often unable to prepare solutions of somatose. The best method of preparing it is as follows: Fill a wineglass with cold water, and then add three teaspoonfuls of somatose, which must be sprinkled on the top of the water. The wineglass should be moved as little as possible, so that the somatose remains on the surface of the water. After a few hours the solution is ready for use. The quantity required during the day is best prepared the evening before. The three teaspoonfuls of somatose is sufficient for the day. In the morning a third part may be taken with milk, at lunch, and later at dinner; the remainder should be mixed with soup or porter. —*Brit. Med. Jour.*

The Etiology and Prophylaxis of Tuberculosis.

Andvord (*Norsk. Mag. for Løgevid.*) bases his paper partly on the extraordinary constancy of the death-rate from tuberculosis at all ages in any particular locality, and partly on the after-history of 814 children who had been treated in hospital for "scrophulo-tuberculosis." It was found that 60 per cent. of these were in excellent health, while a third had either succumbed to tuberculosis or were suffering from it at the time the inquiry was made. This shows that the percentage of persons with tuberculous phthisis rises with increasing age. The writer, therefore, comes to the conclusion that infection with the tubercle bacilli begins, as a rule, in childhood, and that in crowded areas the whole population is more or less infected, and inherits the predisposition to infection. The tuberculosis death-rate in any locality depends on a local constant, which Andvord considers to be the inherited or acquired power of resistance of its inhabitants to the infection. The practical conclusion is that, in the battle against tuberculosis, the chief point is to protect the children from infection, and therefore to attack all enlarged tuberculous glands.

Obituary.

DR. HENRY HOVER WRIGHT.

It was no great surprise to us when we heard that Dr. H. H. Wright, of Toronto, was dead. He had completed his life-work, and was for some time simply waiting for the last summons. He had a slight attack of influenza about March 1st, and, although there was no serious complication, he sank gradually after March 4th until the morning of the 7th, when death came. He was born in Prince Edward County, 1816, and was therefore in his eighty-third year. He derived most of his preliminary education from the ordinary common schools that existed at that time, and from his father, who was one of the pioneer ministers of Upper Canada, as this province used to be called. He commenced the study of medicine in York (Toronto) under Dr. Rolph, in 1832, and remained with him until the troublous times of 1837, when Dr. Rolph was compelled to leave the country on account of his connection with the Mackenzie rebellion. Young Wright shortly followed, and remained with Rolph, in Rochester, more than a year, after which he returned to Canada, and received his license to practise from the College of Physicians and Surgeons, Upper Canada, January 28th, 1839.

Dr. Wright practised for a short time in Dundas, and then went to Markham, where he was engaged in general practice until 1853, when he came to Toronto, and became a lecturer in Rolph's School. He was best known as Lecturer on the Practice of Medicine in the Toronto School of Medicine, in which he and the late Dr. W. T. Aikins were the two leading spirits after the split in the Faculty, when Rolph established a separate medical school. As a lecturer he was fortified by a thorough knowledge of his subject, acquired by systematic work and careful observation. He aimed at nothing brilliant in an oratorical way, but simply attempted to teach in a plain, simple, and practical way what he well knew about each disease. His great desire was to make his students take a broad view of the subject, and he devoted much time to teaching the general principles of medicine. The good student liked his lectures, the poor student often preferred a small text-book.

Apart from his work in the lecture-room, he did much to raise the general standard of medical education and of the profession in this province. He took a very active part in the establishment of the Ontario Medical Council, firmly believing

that a central examining board would be the best safeguard against cheap degrees. We believe that, although much credit is due to his co-workers at that time, W. T. Aikins and Thorburn (of Toronto), Dixon (of Kingston), and some others, Dr. Wright may fairly be considered the father of that organization. His motives were high-minded and perfectly unselfish, and his efforts were untiring and judicious. We will not attempt now to go further into detail with reference to the great work that was then done, but we hope the profession of this country will never forget what they owe to Dr. Wright in connection with the formation of our Provincial Medical Parliament. Dr. Wright was an active member of the Council from 1880 to 1890, and for a time its President.

It is somewhat difficult to do justice to the admirable character of Dr. Wright. He was fully possessed of honesty, not of the modern sort, which is so much tinctured with diplomacy, but honesty absolutely unveneered and uncompromising in all respects. He hated shams and tricks, and was never afraid to express his opinions. He was sometimes terribly severe in his criticisms of time-servers and their methods. He was blunt and outspoken at all times, but beneath a bluff exterior he carried a heart as tender as that of a child, and as generous as that of any philanthropist that Canada has known. As one of the leading physicians of Toronto he must be placed in the list with Widmer, Rolph, Aikins, Bovell, Hodder and Workman, who were recognized as great men. As Dr. Wright lived in comparative retirement for several years on account of the infirmities of advanced age, many of our younger physicians have but little conception of what he did for our profession; but there exists a large number of men, in and out of Canada, who well remember what he was and what he did in the old days. Many grateful students and other warm personal friends will ever respect and revere the memory of one of the greatest physicians that Canada has produced.

CHARLES McDONALD, M.D.

Dr. Charles McDonald, of Tilsonburg, died suddenly under peculiarly distressing circumstances, March 1st, 1899, aged 40. We learn from the Toronto daily papers that his health had not been good during the last few months, but he was able to attend to his work fairly well. On the day before his death he saw several patients. He made one midnight visit, returned to his home at 1.30 a.m., and went into the drug store of his brother, Mr. John McDonald. At seven o'clock his brother found his dead body lying on the floor of the dispensing room. It was supposed that death was

instantaneous. Dr. McDonald received his medical education in the Toronto School of Medicine, the degree of M.B. from the University of Toronto, M.D. from the University of Victoria College, and the double Edinburgh and Glasgow qualification all in 1880. He commenced practice in his native town of Tilsonburg in 1881, and remained there till the time of his death. He was always popular as a student and as a practitioner, and, in addition to his relatives, leaves many warm friends, all of whom deeply deplore his untimely end. A widow and two daughters survive.

ARTHUR GEORGE MACHELL, M.B.

We have to announce with deep regret the death of Dr. Arthur Machell, of Owen Sound, which occurred at the house of his brother, Dr. Henry Machell, Toronto, March 4th, 1899. He had an attack of la grippe some weeks ago, the chief symptom for some time being inflammation of the middle ear. His brother went to Owen Sound to see him, and decided to bring him to Toronto. Although he suffered much pain it was hoped that recovery would soon ensue. Suddenly, however, about March 1st, serious cerebral symptoms appeared, and grew rapidly worse until the morning of the 4th, when his medical attendant realized that death was inevitable. He was forty-three years of age. Arthur Machell and Charley Macdonald, as their friends were wont to call them, spent three years of their student life together in the old Toronto School of Medicine, and both were general favorites. McDonald graduated one year before Machell, and both died in the same week. Dr. Machell settled in Owen Sound shortly after graduating, and remained there until he came to Toronto three weeks before his death. His widow and one daughter survive.

THEODORE S. COVERNTON, M.D.

We have to record with deep regret the death of our dear friend, Dr. Theodore Covernton, which occurred at Los Angeles, Cal., March 16th, 1899. He received his medical education in the Toronto School of Medicine, and became M.B., University of Toronto, in 1875, and M.D. in 1878. After practising some years in Toronto he went to England, and took a post-graduate course in sanitary science in Cambridge in 1884. On his return he resumed practice in Toronto, and was appointed lecturer in Sanitary Science, Trinity Medical College. On account of failing health he resigned his position, about 1889, and went to Spokane Falls. As the climate there did not agree with him he went to

California, and lived in Ontario for a number of years. A few weeks ago he was so ill from phthisis that his friends persuaded him to go to a sanitarium in Los Angeles. He was forty-five years of age and unmarried. He was much liked by all his friends and patients, and, if his health had been good, he would undoubtedly have attained a high position in Toronto.

HENRY PORTER McCAUSELAND, M.D.

Dr. H. P. McCauseland was a native of Toronto, and took his medical course in Trinity Medical College, and became M.D., University of Trinity College, in 1882. Soon after graduating he went abroad and lived for some years in Sydney, Australia. Recently he came to America, and, when in Baltimore, died suddenly, March 11th, 1899, aged 37. His remains were brought to Toronto, and buried March 16th.

LEVI BOWMAN CLEMENS, M.D.

Dr. Clemens, of Berlin, died after a brief illness of forty-eight hours on March 17th, aged 41. He was attending to his work as usual until the evening of the 15th, when he complained of feeling ill. Next day at noon his symptoms were considered serious, and he was removed to the Berlin-Waterloo Hospital in an unconscious condition. He remained in a condition of coma and gradually sank until the following day, when death came, caused by cerebro-spinal meningitis. He was one of the most prominent physicians and popular citizens in that section of the country. At the last general election for the Ontario Legislature he was the Liberal candidate in opposition to Dr. Lackner, and was defeated; but, Dr. Lackner having been unseated, he would again have been a candidate, had he lived, at the new election which will take place shortly. Last year he was Reeve of Berlin, and at the time of his death was Medical Health Officer.

ARCHIBALD CHARLES GAVILLER, M.D., C.M.

Dr. A. C. Gaviller, who resided at Grand Valley, Ont., died on January 7th, 1899. He was much respected, and deeply regretted by a wide circle of friends, who knew him to be a man of no ordinary worth in every way. He was an exceptionally well-qualified medical man. He graduated in 1882 at Trinity, and took the University gold medal, the highest honor of the year, as well as the first silver medal of Trinity Medical College, the second honor of this medical col-

lege of the same year. In addition to this, some years after graduating, he took at least two post-graduate courses in New York, and had just before his death qualified himself fully as a specialist in ophthalmological and otological work. His death was due to overwork and exposure to the excessive heat in New York, while there for some months last summer. He was only forty-one years old at the time of his death. He was a nephew of Dr. Geikie, Dean of Trinity Medical College, Toronto.

DUNCAN McCALLUM, M.D.

Dr. Duncan McCallum, of Detroit, died of pneumonia after a brief illness, March 9th, 1899. He was born in Brantford, and lived there until he came to Toronto to study medicine in Trinity Medical College. He completed his course in this school and graduated in Trinity University.

NICHOLAS HOPKINS, M.D.

Dr. Hopkins, a resident of Kincardine for twenty-four years, died March 21st, 1899, aged 83. He was a native of Ireland and came to Canada in 1837. He lived at Montreal, Brockville, Toronto, London and Dunnville before going to Kincardine. He was an ardent Orangeman, a strong Conservative, and a physician of more than average ability.

WILLIAM FRANCIS SCOTT, M.D., M.R.C.S.

Dr. Scott, of Hull, Que., died suddenly at his home, of heart failure, March 9th, 1899. He was a son of the late Judge John Scott, of Goderich, and a nephew of the late Alonzo Wright, of Ottawa. He was an ex-Mayor of Hull and a surgeon-major of the 43rd Battalion. He received M.D. from McGill and M.R.C.S. (Eng.) in 1876. He was one of the most prominent Conservatives in Ottawa County, and would probably have been a candidate at the next Federal election had he lived.

HENRY JONES, M.R.C.S.—Mr. Henry Jones, of London, England, better known as "Cavendish," the great authority on whist, is dead.

WILLIAM RUTHERFORD, M.D., F.R.S.—Dr. William Rutherford, the distinguished Professor of Physiology in the University of Edinburgh, died of influenza after a brief illness, February 21st, aged 60.

THOMAS COOKE, F.R.C.S.—Mr. Thomas Cooke, the founder of the well-known London School of Anatomy and Physiology, died suddenly in February last.

W. M. NELSON, M.D.—The *Montreal Medical Journal* announces the death of Dr. Nelson, a graduate of McGill in 1894, who made a specialty of dermatology.

JAMES HENRY ETHERIDGE, A.M., M.D.—Dr. Etheridge, of Chicago, died February 9th, 1899, aged 55. He was Professor of Gynecology and Obstetrics in Rush Medical College; and had the reputation of being an admirable teacher and skilful operator.

SIR JOHN STRUTHERS, M.D., F.R.C.S.E., LL.D.—Sir John Struthers, emeritus Professor of Anatomy in the University of Aberdeen, died February 24th, aged 76. He was one of the greatest anatomists, and one of the best teachers of anatomy that Great Britain has produced. He attended the meeting of the Canadian Medical Association at Montreal in 1884, and was present at the banquet given in the Windsor Hotel on that occasion. His genial and kindly manners endeared him to all who met him at that time. He took special interest in Canadian medical matters, and had several conferences with representatives of the various provinces, including those of the Ontario Medical Council.

GEORGE HENRY ROHÉ, M.D.—Dr. George H. Rohé, of Baltimore, while in attendance upon the National Prison Congress at New Orleans, died suddenly, February 6th, 1899, aged 48. He was well known as one of the best alienists and gynecologists in the United States. His work in connection with the Maryland Hospital for Insane, at Springfield, gave him a world-wide reputation. He held many positions of honor in various societies, and was at the time of his death President of the American Health Association. He will be remembered by the profession as the able and genial gentleman who presided at the meeting of the American Association of Obstetricians and Gynecologists in Toronto in 1894.

Book Reviews.

The Principles which Govern the Treatment of Diseases and Disorders of the Heart. The Lumleian Lectures, Royal College of Physicians, London. By SIR RICHARD DOUGLAS POWELL, BART., M.D. (Lond.), F.R.C.P., Physician in Ordinary to the Queen, etc., etc. London: H. K. Lewis, 136 Gower Street, W.C. 1899. Pp. 116; demy 8vo. Price, 6s.

Even among the multitude of recent works upon the heart, such as those of Balfour, Gibson, and the Broadbents, one finds a welcome and most useful addition to his library in this series of three lectures. They are typically "post-graduate" lectures, dealing in a large and luminous manner with a most important subject, without attention to the minutiae of drugs, dosage, and diagnosis, which would probably have found place in the work of a physician less experienced and less broad in his outlook and grasp of the subject. No practitioner can read this work without going about the hygienic, dietetic, regiminal, and psychical treatment of patients suffering from disorders of the heart with greatly widened notions of his duty towards such cases. The literary quality of the work is what one would expect from its distinguished author. The publisher's work is quite up to its high standard.

David Harum. By EDWARD NOYES WESTCOTT. Illustrated. Cloth, \$1.25; paper, 75 cents. Toronto: William Briggs, Publisher.

A writer in a recent number of a medical journal discusses in a light vein the question of the literature suitable for influenza patients. Zola undiluted, according to this authority, would be likely to aggravate the symptoms in the gastro-intestinal type, and in the catarrhal type the "Sorrows of Satan" must be avoided as tending to stimulate the flow of tears, while "David Copperfield" is said to afford great relief in properly selected cases. Had this writer known of the existence of "David Harum" he would undoubtedly have recommended this work as almost a curative agent in most cases. As a stimulant, in some respects it surpasses "Canadian Club," and is guaranteed to relieve certain nervous symptoms more rapidly than any of the coal tar preparations when judiciously administered. Though published at the Methodist Book Room it cannot be accurately classed as theological literature of an

HEALTH.

REST.

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inflammatory character. It should be read by every unregenerate man and the truly good physician.

The *Philadelphia Item* speaks thusly of the author: "We give Edward Noyes Westcott his true place in American letters—placing him as a humorist next to Mark Twain, as a master of dialect above Lowell, as a descriptive writer equal to Bret Harte, and, on the whole, as a novelist on a par with the best of those who live and have their being in the heart of hearts of American readers. If the author is dead—lamentable fact—his book will live."

The *Boston Literary World* says that it is "true, strong, and thoroughly alive, with a humor like that of Abraham Lincoln, and a nature as sweet at the core. . . . The book adds one more to the interesting list of native fiction destined to live portraying certain localities and types of American life and manners."

"PROGRESSIVE MEDICINE."—The following announcement should have appeared in our last issue: Messrs. Lea Brothers & Co. announce for publication in March, 1899, the first volume of *Progressive Medicine*, a new annual which will be issued in four handsome octavo, cloth bound and richly illustrated volumes of about four hundred pages each. The several volumes will appear at intervals of three months. In this age of unusual progress, so rapid is the advance in all departments of medical and surgical science that the need for condensed summaries which shall keep the practitioner up to date at the least possible expenditure of valuable time has become imperative. What the busy physician needs to-day is a well-told tale of medical progress in all its lines of thought, told in each line by one well qualified to cull only that matter worthy of his attention and necessary to his success. He needs material which shall teach him all that the master of his specialty knows of the year's work. To insure completeness of material and harmony of statement, each narrative will receive the careful supervision of the general editor, Dr. Hobart Amory Hare. Those associated with Dr. Hare in the production of *Progressive Medicine* include a brilliant gathering of the younger element of the profession. With the appreciation of the self-evident utility of such a work to all practitioners, the publishers are enabled to ask the very moderate subscription price of ten dollars for the four volumes. The publishers offer to send full descriptive circulars and sample pages to those applying for them.



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Miscellaneous.

CREOSOTE IN PHTHISIS PULMONALIS.—After a brief review of creosote and guaiacol and the various methods of employing these products, Dr. L. H. Warner, of Brooklyn, N.Y., says:

"In the treatment of phthisis the administration of creosote causes the fever and cough to diminish and the patient to improve in appetite and flesh. It has antifermentative powers, and though it may not kill bacteria, it destroys their ptomains, and renders their action non-toxic and inert. In the treatment of phthisis it becomes of especial value if reinforced by nuclein. Nuclein increases the number of white blood corpuscles and is, therefore, a valuable agent in combating tuberculosis in its initial stage. Reviewing the aforementioned facts, we have creosote, guaiacol, nuclein and tonics as factors in the treatment of phthisis pulmonalis. How and in what proportion can they be best combined to become efficient in the treatment of this disease? Beef, milk and wheat peptonized, with creosote and guaiacol, otherwise known as Liquid Peptonoids with Creosote, is an eligible method of administering the above in combination. Each tablespoonful contains two minims of pure beechwood creosote and one minim of guaiacol combined with the nutrient and reconstituent properties of Liquid Peptonoids. In two different hospitals the entire consumptive wards were placed on this remedy with most excellent results.

"CASE 1.—M. P., female, aged 49, admitted to hospital June 2nd, 1898. Family history tubercular. For some years patient has been troubled with severe attacks of cough, resulting from an attack of la grippe in 1894. Has dry hacking cough, with gelatinous expectoration, containing bronchial and alveolar epithelium in a state of fatty metamorphosis, streaked with blood. Temperature 101 degrees. Loss of appetite and dyspeptic symptoms. Inspiration of cog-wheel character, expiration high pitched and dulness on percussion. Patient has lost about thirty pounds within last few months. Weighed on January 2nd, 145 pounds. Blood count, forty-five per cent. Hæm, 3,000,000 red cells, 7,500 white cells. Treatment began with tablespoonful doses of Liquid Peptonoids with Creosote every four hours. Patient slowly improved, and on June 16th doses were doubled to two tablespoonfuls every four hours. Hereafter a rapid improvement took place. July 1st, patient's cough has disappeared, no bacilli in sputum, appetite good, weight 151 pounds. This treatment was continued till July 26th, when patient left the hospital, apparently well. Weight 155 pounds, blood examination Hæm, 62 per cent., red cells 3,650,000, white cells 7,200, no cough, good appetite.

"CASE 2.—E. W., male, aged 20. Family history tubercular.

The Canadian Practitioner and Review.

VOL. XXIV.

TORONTO, MAY, 1899.

NO. 5.

Original Communications.

THE ASTRAGALUS IN CONGENITAL TALIPES— EQUINO-VARUS.*

BY CLARENCE L. STARR, M.D.,

Orthopedic Surgeon to Hospital for Sick Children; Assistant Demonstrator of Anatomy, Medical Faculty, Toronto University.

The description of the pathological anatomy of the astragalus in club-foot is presented from a study of the specimens shown, which were kindly placed at my disposal by Professor Primrose, and from notes of bones obtained during residence as interne in the Hospital for Ruptured and Crippled, New York. The excellent description of dissections of deformed feet, made by Mr. W. J. Walsham, of St. Bartholomew's, London, has also been made use of.

In the deformity of club-foot all of the bones of the foot take part, either as an alteration of the shape of the bones or as an alteration of their relation one to another. The two bones in which an alteration in shape is a prominent feature, are the astragalus and os calcis, and of these the astragalus shows the most changes. The remainder of the bones are changed in their relation one to another, but very little, if any, change in shape is noted.

On account of mal-nutrition and certain restrictions in movement, the bones generally are smaller than normal, and the astragalus shares in this decrease in size.

The head is usually enlarged and irregular, and the rounded articular surface which fits into the concave surface of the scaphoid, instead of being directed forward, is directed nearly inward.

* Read before Pathological Society.

In consequence of this the head presents two facets, one sometimes devoid of cartilage on the inner aspect of the head or side of the neck, and the second external to this on the anterior surface of the head.

The inner facet articulates with the scaphoid, while the outer, well marked in fetal astragali, more or less overgrown with ligamentous structures in older cases, presents itself as a prominence on the dorsum of the foot. These facets are separated by a distinct vertical ridge, where ligaments are not attached to the outer facet.

The neck is elongated and presents an abnormal inward obliquity and downward deflection. These conditions are the main obstacles to correction of varus and equinus deformity.

The length of the neck equals, in most cases, the length of the body of the bone, while in some the neck forms more than one-half the total length of the bone. Normally the length of the neck is about one-third the total length of the bone.

The obliquity has been extensively investigated by Parker and Shattuck, of London, and they have made some very interesting comparisons of the obliquity in the fetus, in adults, in talipes and in anthropoid apes.

The angle of obliquity is found by fastening a thread across the trochlear surface parallel to its internal border; and another parallel to the inner side of the neck. The angle formed by the union of these two lines is taken as the angle of obliquity.

Parker's results are as follows: Twenty specimens of adult astragali were taken promiscuously and the mean angle was found to be 10.6° , the maximum was 26° , and in three cases the angle was so small that it was impracticable to measure it.

In the fetus the mean angle was 38° , the maximum 42° , and the minimum 35° .

In equino-varus the mean angle was 49.6° , the maximum 64° , the minimum 31° .

In only one case was the angle in talipes less than the mean angle of the fetal astragalus.

	Maximum Angle.	Minimum Angle.	Mean Angle.
Adult ..	26°	0°	10.6°
Fetus ..	42°	35°	38°
Talipes ..	64°	31°	41.6°

Besides the inward obliquity there is in nearly every case a downward deflection of the neck, which is increasingly great as the age of the patient advances and the foot has been walked upon.

The internal surface is shortened from above downwards, as compared with the normal bone, and in some instances is so much so as to make the bone wedge-shaped with the base of

the wedge directed outward. This fact is especially noted by Redard, who classes this as one of the main reasons why adduction of the foot is so hard to overcome. The observation of the writer does not correspond with this, only one or two cases showing marked thinning of the internal surface. The articular portion is narrowed and found chiefly as a narrow strip along the upper border continuous with the superior or trochlear surface. The balance of the internal surface is taken up with the attachments of the deltoid ligament. The internal surface of the normal fetal astragalus shows a similar narrow band of articular surface and it extends forward on to the side of the neck.

The external surface has its articular surface enlarged, on account of the forward displacement of the bone, so that it extends nearly as far backward as the posterior border. The anterior portion of this articular surface is pushed forward in front of the external malleolus and separated by a distinct vertical ridge from the posterior portion which articulates with the external malleolus. Sometimes the anterior portion of this surface is thickened so as to form a prominence or even a tubercle, and may in that event prove an obstacle to reposition of the bone, by wedging itself against the external malleolus in attempts at dorsal flexion.

The superior surface has its articular surface placed more posteriorly than normal. The surface commences about half-way back on the bone and extends backward from this point to the posterior surface. The anterior part of this new trochlear surface is about normal in width, but gradually tapers as it proceeds backward, so that the trochlear surface, instead of being rectangular, is more or less triangular with the apex backward. The portion of the bone in front of this which was originally part of the trochlear surface, is usually covered with ligamentous structures, the anterior ligament of the ankle being attached to it.

The inferior surface may have its articular facets entirely displaced, the usual arrangement being a crowding of the posterior facet forward so that it comes to occupy nearly all of the surface. The long axis of this facet, instead of being directed forward and outward, is directed forward or even in some cases slightly inward. The interosseous ligament is thinned at its posterior part or sometimes is absent. The anterior facet is small and placed partially under the sustentaculum tali and partially on under surface of the neck.

The posterior surface is nearly lost, only a narrow edge of bone representing this surface, separating the superior from the inferior surfaces. The groove for the tendon of the flexor longus hallucis is nearly always absent or very slightly marked when it is present.

Clinical Notes.

A CASE OF TROPICAL MALARIA

REPORTED BY GEO. A. SUTHERLAND, M.D.,

Of the Resident Staff of the Toronto General Hospital.

A. P., aged 29, came into the Toronto General Hospital, under the care of Dr. W. H. B. Aikins, March 8th, 1899.

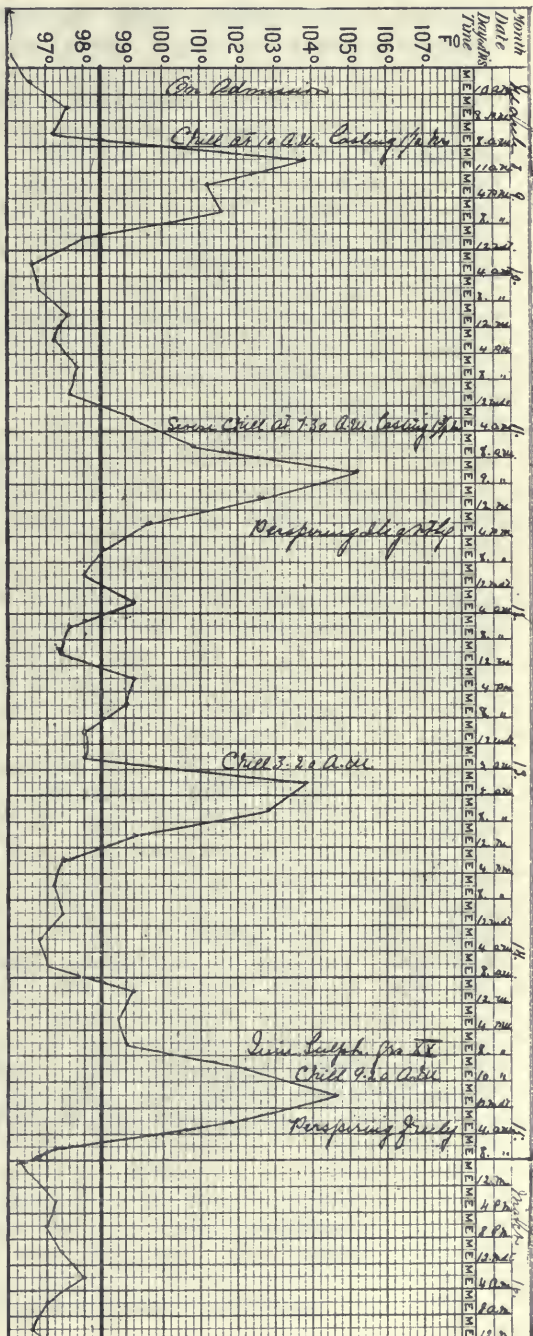
His history, briefly, is as follows: He is a cook by occupation, unmarried, never had any illness of any kind, has always been strong and healthy and taken particularly good care of himself in every respect. During his stay in Cuba, engaged in the Hispano-American war, he had a severe attack of dysentery. He states having had malaria, but gives no history of any paroxysms characteristic of that disease. He came to Canada and resumed his occupation in Toronto, October 12th, 1898. On February 19th he had a severe chill, followed by fever and sweating, intense headache, prostration, pains in his limbs, nausea, and vomiting. Such paroxysms have occurred every forty-eight hours until March 15th.

The patient knows he is going to have a chill some hours before its advent by uneasy sensation in his epigastrium and occipital headache. At the beginning of the cold stage he feels nauseated, has a desire to yawn and stretch, shivers, the surface temperature is low, and the face looks cold and blanched. The headache was very severe, and the patient usually vomited. The pulse was small, hard and rapid. Rectal temperature about 103° Fah. Duration of cold stage was about 1½ hours. The *hot stage* was ushered in by waves of heat transmitted down his back; face become flushed and expression less anxious. There was intense thirst; headache remained severe; pulse was of good volume and good tension. Temperature rose to 104° and 105°. Duration of the hot stage was about five hours. The sweating stage followed the hot stage, and lasted from one hour and a half to two hours, after which the patient relapsed into a sound and refreshing sleep. Periods of sweating have occurred once or twice since the chills have ceased.

Physical Examination.—Patient is anemic; fairly well nourished and well developed muscularly. Nothing of note was found in the respiratory, nervous, nor lymphatic systems.

Blood and Vascular System.—There is slight arterial fibrosis. The blood showed marked rouleaux formation. The differential

count resulted in a slight diminution in the number of polymorpho-nuclear neutrophiles, and a slight increase in the number of the large mononuclear forms. Blood smears showed considerable blood pigment, and the presence within and without the red blood cells of the tertian malarial organism. The plasmodia were obtained up to March 19th, three days after the last chill occurred, and after the patient had had forty grains of quinia sulphate. The red blood cells containing the plasmodium were swollen to a size one and a half times the normal size; had a faint outline, and the plasmodium occupied a small or large part of the cell, according to its age. The area not occupied is clear, having lost its hæmoglobin to a great extent. The plasmodium stains faintly, and contains very dark granules, which, in the fresh specimen, are in rapid motion, a result probably of Brownian movement. Smears obtained at the beginning of the paroxysm showed the plasmodium broken up in fifteen or twenty



roundish hyaline bodies smaller than a red blood corpuscle, irregularly grouped about a central mass of blood pigment. Other forms of the tertian organism were not found, probably because smears were not taken just at the proper time.

Genito-Urinary System.—Kidneys not palpable. Urine was increased in quantity during the chill. Amount of urine for twenty-four hours was sixty-five ounces—urea, 437.5 grs. The urine was slightly dark in color with a specific gravity of 1030—markedly acid, and having a distinct uratic deposit. Albumen and sugar were absent.

Spleen was moderately large and distinctly palpable and tender. It extended forwards to a point 3 inches from the median line in front, downwards $1\frac{1}{2}$ inches below the costal margin, and upwards as far as the upper margin of the eighth left intercostal space.

Liver was moderately enlarged and easily palpated—lower margin in the median line to a point midway between the tip of the ensiform cartilage and the umbilicus; in the nipple line $2\frac{1}{2}$ inches below the costal margin; in the mid-axillary line, lower border of the ninth rib.

Treatment.—The chills responded very quickly to quinia sulphate; no paroxysms have occurred since it was freely given. An additional examination of the blood was made on the 19th of March by Dr. H. J. Hamilton, assistant pathologist to the hospital. This showed hæmoglobin 48 per cent., and the number of red corpuscles to the c.cm. to be 2,640,000. Pepto-Mangan (Gude) was then prescribed for this condition in teaspoonful doses four times a day, and the recovery of the patient has been rapid indeed. While taking this preparation a second examination of the blood was made on the 29th March, showing hæmoglobin 74 per cent. and red corpuscles 3,820,000. Another examination on April 7th gave hæmoglobin at 80 per cent., and red corpuscles 4,280,000. A final examination, April 20th: hæmoglobin, 90 per cent.; red blood corpuscles, 4,850,000. The case is interesting because malaria is rarely met with in this district at the present time, and the few cases seen are generally imported. The other point of interest about this particular case is the quiescent stage of the disease from the early autumn months of last year to February of the present year; also the rapid increase of the red corpuscles while taking Gude's Pepto-Mangan.

DUCT CARCINOMA OF THE BREAST: SCHLEICH'S SOLUTION OF COCAINE USED AT OPERATION.

HERBERT A. BRUCE, M.D., F.R.C.S. (Eng.).

The patient, from whom breast* was removed, has briefly the following story:

E. T., aged 61. No relative known to have had cancer. The affection of the breast was first noticed a year ago. Her attention was called to it by a dull aching pain, felt in the left nipple, for an hour or so one night after retiring. This pain was felt a few days later for a very short time. With the exception of these two occasions, the patient has never suffered pain. She then noticed a small lump beneath the nipple. This has gradually increased in size until the present. She has had slight discharges of a bloody character at irregular intervals during the past year. The breast gives her a stiff feeling and a sensation of weight, but no pain.

Condition on Examination.—Nipple slightly retracted. A dark scab, evidently formed chiefly of blood, covers part of the nipple. The skin immediately surrounding the nipple is adherent to the mass beneath. The diseased breast is smaller than the other one. The tumor is hard and resistant to the touch, rounded in form, with a fairly well circumscribed margin. It is about four inches in diameter, and surrounds the nipple equally in all directions. On putting the pectoralis major muscle on the stretch, the growth can be moved to a slight extent in the direction of its fibres. High up in the axilla three enlarged lymphatic glands could be felt. It was diagnosed as a duct cancer. As the patient had a weak heart, and it was feared she could not stand a general anesthetic, the operation was performed with Schleich's solution of cocaine. About an ounce and one-half of the solution was injected along the line of the intended incision, and half an ounce beneath the breast. The entire breast was removed with the pectoral fascia and the costo-sternal origin of the pectoralis major muscle (as the growth was found to extend into the superficial part of the pectoralis muscle). The fat and lymphatics leading to the axilla and the glands and fat in the axilla were entirely removed. The incision was closed in the usual way with silkworm gut sutures, and a drainage tube placed in the axillary end of the incision. The patient was given an ounce of brandy in addition to the cocaine injection, and although she complained at the time, she afterwards stated that she felt no pain, but was simply frightened from the knowledge of what was going on. The drainage tube was

* Specimen shown at the Toronto Clinical Society.

removed in twenty-four hours, and the stitches were removed in ten days, the wound having healed throughout by first intention.

Duct cancer is an exceedingly rare form of the disease. It consists in the development of malignant papillomatous nodules within the dilated ducts, and usually situated close to the nipple. These nodules are covered with columnar epithelium, and are very vascular, which accounts for the blood-stained discharge from the nipple. They grow slowly, and do not as a rule attain any great size. The nipple is usually not retracted, but in this case it was to a slight extent.

Marmaduke Shield, in his treatise on "Diseases of the Breast," recently published, says that he has examined carefully six specimens of the villous variety of duct carcinoma, and has come to the following conclusions: That the disease commences as the well-known papilloma. Into the ducts, or into cystic dilations of them, simple papillary growths project. These frequently bleed and cause a hemorrhagic discharge from the nipple. They may so increase as to fill the cavity in which they originate. In certain cases the epithelium spreads through and beyond the lining membrane of the duct as an infective growth. The papillary projections are composed of flimsy epithelium loosely held together, and generally attached to a delicate central stalk containing blood vessels.

Beck and Godlee, in reporting on a specimen of Nunn's, mention the rarity of this variety of cancer, which they pronounce to be characterized by (1) a coarse fibrous stroma; (2) large spaces lined with epithelium, and often filled with blood; (3) the projection of villous growths into these spaces; (4) a tendency to infiltrate surrounding tissues.

Thin gives an elaborate account of the histology of a case of breast carcinoma where there was a disposition to form columnar epithelium. Together with Waldeyer he believes that in these cases the morbid change in the epithelium begins in the lactiferous ducts. If very complete extirpation is carried out, permanent freedom is likely to be obtained.

FROM ASYLUM TO HOSPITAL.

BY ERNEST HALL, M.D., VICTORIA, B.C.

Intensely satisfactory as it may be to report convalescence after the removal of physical disease, it is insignificant to that experienced when, in addition to the physical, the mental also partakes of the regenerative process. This restoration of normal psychical action, this ministrations to minds diseased is the grand-est evolution of modern medicine and the surgeon's highest ideal.

Mrs. X., aged 32, excellent family history, previous health good, one child twelve years ago. Shortly after birth of child patient developed pelvic inflammation, which became chronic. After suffering two years she obtained relief. A few months after the patient began to give evidence of mental derangement, which was attributed by some of the family connections as the result of her having given some little attention to spiritualism. As stated by her sister, a most intelligent lady, the patient soon became a mental and physical wreck. She was accordingly placed in the asylum nine years.

On December 3rd, 1898, through the kindness of Dr. Bodington, medical superintendent of New Westminster asylum, I examined her under chloroform, finding retroversion with adhesions, fixed appendages and enlarged ovaries. Operation advised.

At the operation at St. Joseph's Hospital, January 27th, 1899, following conditions were found: Adhesions of clitoris, small urethral caruncle. Right ovary presented one complete cyst size of a small peach; the left was cirrhotic, and showed smaller cyst. Delicate adhesions bound these structures down to pelvic wall.

Convalescence was normal; patient gave no trouble; the mental power slowly returned. On March 14th her sister wrote: "My sister much improved; seems perfectly rational in her conversation."

Since I have not seen this case for several weeks, I do not presume to report her as completely cured, but there is reason for the supposition that the pelvic disease and the mental condition were in some way related.

A CASE OF BRACHYCARDIA.

REPORTED BY DR. W. E. GRAHAM,

Of the Resident Staff, Toronto General Hospital.

E. A., male, aged 44 years, was admitted to Toronto General Hospital on March 9th, under the care of Dr. W. H. B. Aikins, complaining of occasional attacks of weakness, dizziness, blindness and shortness of breath, and a more or less persistent pain just below the left nipple, with a pulse varying from 30 to 38 or 40 per minute.

Family history is negative—neither of his parents nor any of his brothers, sisters or children have slow heart.

Personally, he was always a strong, healthy, hard-working man, working at lumbering, using coarse food, drinking very moderately, but smoking very heavily until two months ago.

He has worn a truss for four years for a hernia caused by lifting heavy stones at that time. He has suffered from dyspepsia for about five years.

Ten weeks ago, while at work, he was suddenly seized with a "weak spell," becoming cyanosed with dyspnea, dizziness and specks before his eyes, which lasted about half an hour. He had repetitions of greater or less severity every day for a week, having some days three or four. At present, he often feels weak, but has none of the severe fainting spells. He has never been troubled with edema or any signs of failing circulation.

He is a man of the phlegmatic type. Genito-urinary and nervous system are normal. Stomach examination shows deficiency of HCl and pepsin. Respirations are usually about twenty per minute; pulse, from thirty to forty per minute, full and strong; arteries, soft and elastic; heart not enlarged; impulse, faint on account of thickness of chest wall; no thrill; a soft systolic murmur at apex, transmitted to left axilla. Systole seems longer in time, but diastole is most affected. He has also a peculiar congenital symmetrical deformity of his hands. The distal phalanges are absent from first, second and fourth fingers, and the distal and middle phalanges from the third. The ends of fingers are rounded off at these joints, and nails are absent. His father, three brothers, three sisters, and six of his children have the same deformity. Two brothers, one sister and three children have normal fingers. During his stay of about three weeks in the hospital liq. strych. was given in doses of four minims four times daily, but this did not in any way increase the frequency of the heart's action. It was also interesting to note that during residence in hospital he developed an acute tonsillitis with a temperature of 102° F., yet the pulse-rate did not advance with elevation of temperature, and at no time did it run above forty per minute.

Society Reports.

TORONTO CLINICAL SOCIETY.

The fifty-third regular meeting of the above society was held in St. George's Hall, Elm Street, on Wednesday evening, the 12th inst. The President, Dr. Grasett, occupied the chair.

Cryptorchid.

Dr. John L. Davison read short notes of this condition, and presented the patient, a boy, aged 17, for examination by the Fellows present. He said the literature was rather meagre on the subject, with the exception of Heath's Dictionary of Surgery. In the first place, regarding the question of supernumerary testicle, that they did exist was a fact, though some authorities say that a third testicle had never been actually proven. When such cases exist, there are also other marked sexual deformities. The penis was decidedly infantile; the epididymis may be found in the scrotum, though partly developed, and the rest of the testicle represented by a small mass like a pea without any particular structure. In these cases the vas deferens may be absent; the secretion cannot reach the urethra. It may be due to delayed descent if the testicle is not found in the scrotum at birth. It sometimes comes down and makes its appearance at puberty, and then there is always a hernia. It may be a question whether the case is one of complete absence of the testicle, an anorchism, or one of cryptorchidism.

Dr. E. E. King, in discussing the case, thought it one of undeveloped testicle, and was satisfied he could feel the cord on both sides. On the right side he could make out a mass the size of a small bean. He thinks as the patient grows older the organs will develop.

Dr. Davison further stated, in cases of this kind, where the testicle is in the inguinal canal or in the abdomen, if it is pressed upon for any length of time it is very liable to take on malignant disease.

Dermatitis Herpetiformis.

Dr. Graham Chambers presented a patient with this condition, a woman between thirty and forty years of age. The name Dermatitis Herpetiformis, he stated, was first applied to the disease by Duhring in 1884. It is a very chronic disease,

and, in fact, almost incurable. Itchiness is very pronounced; and the lesions are always grouped, and have an herpetic appearance, being irregular in form. Occasionally you get one case with one kind of lesion, and sometimes you get all the lesions together. The disease in this case first made its appearance about fifteen years ago. Previously she had been very nervous, so marked at times that she was unable to walk without assistance. Lesions were on the scalp and on all parts of the body. The patient states the lesions are smaller at the present time than at the commencement of the disease. The lesions are frequently found in groups on the face, neck, trunk and upper extremity, and there is no tendency to symmetrical arrangement. The vesicles increase rapidly in size, but rarely become bulla. They rupture and moist mucous surfaces form, increase in size, and small vesicles form around the periphery. Pustules seldom form. The angular outline to the vesicles is similar to Herpes Zoster. When the lesions heal, erythematous patches remain, and some of these show cicatrices. Itching, burning and prickingsensations are nearly always present, and the patient frequently feels these sensations in parts unaffected by the disease. She can tell the outbreak of a new lesion by pain in the region of the liver. In answer to Dr. Pepler as to his treatment in the case, Dr. Chambers said he had only had one case before this one. That case got better, but he was not so sure that she did not suffer a relapse. A form of the disease sometimes occurs in pregnancy. As a rule the disease is not fatal, but so far as he knew very few cases have been completely cured. The treatment employed in this case has not improved the patient to any great extent. Morris speaks of antimony. Wine of antimony was being used in this case, and it was proving very beneficial. In papular eczema you will find that wine of antimony acts very beneficially. You may use any drug that will relieve the itching, but of course it would be only palliative. Locally in this case he had used 2 per cent. sulphur ointment. The disease is undoubtedly a neurosis, and the treatment should be constitutional.

Dr. Chambers also presented two patients with favus, in one of whom the disease had existed for eight years, and in the other three. The mousey odor was not very well marked in either case.

Multiple Angioma.

Dr. H. B. Anderson presented a boy with this condition, aged 15 years. In regard to family history, his mother had a few moles on her face, and his grandmother had warts about her neck and face. The patient is strong and robust, with a heavy facial expression and brownish birthmarks on the head

and nose, not raised. At about nine months a small tumor appeared in the right lumbar region, and has gradually enlarged; and other small tumors on different parts of the body. About six years ago brownish mottling of the skin appeared, and also on the chest. At times they become red. The surface of the larger ones is covered with fine hair; one on the shoulder has an uneven surface, easily indented. All have wide bases; and there are many nodules felt, invisible to the eye. The left breast is diffusely enlarged; the lower ribs prominent and bulged outwards, and a deep depression is seen in the lower sternal region. The condition appears to correspond more to molluscum fibrosum, with brownish pigment moles and enlarged subaceous glands, some of them being vascular enough to suggest an angiomatous condition. Microscopically Dr. Anderson thinks the tumors would show fibrous tissues with dilated blood spaces. Some authorities say they really rise in the connective tissue of the nerve sheaths. That is the view generally held at the present time. In some cases there have been as many as three or four thousand, covering all parts of the body. Others classify these under fibrous tumors, but Senn says they are infective. They are as a rule congenital, being present at birth, but continue to grow afterwards for a considerable length of time. As to prognosis, they undergo involution in some cases. Most frequently after attaining a certain size the tumors become stationary. In some cases they may take on a sarcomatous condition and grow very rapidly. Defective mental development is usually found present, and there is also a tendency to deformities in different parts of the body. Dr. Anderson thought the neurotic origin was shown.

Vesical Calculi.

Dr. Grasett exhibited two vesical calculi, one of which was of a peculiar elongated shape, slightly curved and about two inches in length. The first was from a man of twenty-five or thirty years. There was no previous history of any renal attacks. The patient stated that last spring, without any of the ordinary causes that might produce cystitis, he was attacked with that disease. When first seen by Dr. Grasett he had an acute exacerbation with temperature elevated to 102 degrees. After the subsidence of the fever he was sounded and a stone immediately found without any difficulty. His physician in Japan had never sounded, although he had been under his care in the hospital there for some time. In the patient who had the stone of peculiar shape, prostatic abscess had been at first diagnosed. Dr. Grasett stated he had tried lithotritry in this case, but could not crush on account of not

being able to get the stone into the instrument. He described further how the stone had been removed by the lateral operation. It was partially encysted, and occurred in a young man of some seventeen years.

Double Amputation of both Arms at the Elbow-Joint.

Dr. George A. Peters showed three specimens in which injuries of the forearms and hands necessitated amputation at the elbow-joint. Two of the specimens were from one patient, a young man nineteen years of age, the result of a railway injury, in which both arms were crushed by the wheels. The right arm was removed soon after the injury. The patient begged very strongly to have the other saved, and the surgeon promised not to do an amputation that night until his friends arrived. The right arm shows double fracture of the radius and ulna, the ulna being comminuted. The radius was broken about the junction of the lower and middle third of the bone. The epiphysis is completely separated from the shaft; and there is also compound dislocation at the wrist-joint. In regard to the right arm the skin was torn very badly. The surgeon was able in this case to amputate below the elbow, near to the joint, and get a very good flap of skin, and it healed by first intention. On the other arm the fracture was evidently not nearly so severe. The only injuries to the skin were two openings. The point he wished to make with regard to the degree of injury to the skin, is this, that in the left arm where the injury to the skin was less than in the other, the skin had been torn away from the muscles to a much higher level. The skin was dragged away from the muscles beneath, and was separated to a point above the elbow. In this arm he could not amputate below the elbow-joint. He tried first, but found he had to remove it at the elbow-joint. Even after that a portion of the skin sloughed and has since healed by granulation, so that he has a fairly good stump on that side now. The rule in regard to the amputation of such cases has been very forcibly exaggerated by Mr. Cheyne, of Edinburgh. He says that in these cases of crush from heavy machinery, the rule should be to amputate above the part that you think will recover. The circulation in the left arm was excellent, with all the degree of fracture and tearing of the muscles, tendons, etc., and the nerves were intact, and the patient could feel all over that hand. There was no coldness, and you could feel the pulse at the wrist; and yet under anaesthesia the surgeon found that the skin was entirely separated and there was a great degree of laceration of the muscles. Is the circulation all right? Can the hand survive? Are the nerves all right? In both these were present. It is quite possible the hand might

have lived, but it would have been useless. The hand would have been stiff and a club on the end of his arm, and would have been useless. Another thing, during the process of recovery provided an attempt was made to save the arm, one runs a great danger of sepsis and risk to life. The left arm Dr. Peters amputated the next morning after the condition was found after anaesthesia.

The other case exhibited by Dr. Peters was the removal of the arm below the elbow-joint in an electrical machine. Thinking the current was turned off, the electrician had passed his hand into the box or cylinder to perform some adjustment, when the piston came down and cut his arm off cleanly. It was as evenly cut around as the end of a cuff. The skin had retracted some when seen by the surgeon. In this case, Dr. Peters amputated high up and just saved the elbow-joint. He first stitched the skin over the end of the stump in several directions, and then proceeded to do a circular amputation and in that way he was able to go close to the elbow-joint.

In regard to efforts to save the elbow-joint, it is important to save the attachments of the muscles which pass down from the arm to the forearm, viz., the triceps, biceps, anconeus and brachialis anticus.

Injury of the Forearm.

Dr. Nevitt showed a patient, a man about forty-five to fifty years of age, who had sustained an injury to the forearm with a considerable degree of laceration, and yet with good circulation through the vessels in the hand. The injury was a machine accident, and consisted of a compound dislocation at the elbow-joint and a double or a multiple compound fracture of both bones of the forearm. At first sight nobody would have said a word but that the arm must come off. When the elbow was reduced it looked very presentable, and finding the circulation good, Dr. Nevitt determined to try to save it. The injury to the bones of the arm was very considerable, and the injury to the muscles. Exactly what the injury was, he was not prepared to say. The patient was here presented to the Fellows, and Dr. Nevitt said the condition of the hand and arm is there to show for itself, and the question is whether that is as good as an artificial arm.

Dr. Bruce, who had charge of the case during the illness of Dr. Nevitt, supplementing the data already given, said, four weeks after this accident was received Dr. Nevitt had asked him to look after the case. At that time there was a sequestrum found, although it was present at the time of the accident. This sequestrum was about $1\frac{3}{4}$ inches in length, and was pressing between the ends of the bones. The upper fragment of the

ulna was bent over towards the lower fragment of the radius, and if united in that way there would be no movement in the arm; everything would unite in a mass. Dr. Bruce took a small section out of the radius and wired the bones into position, so that the two fragments of the radius would be in contact with each other—and the fracture was oblique. At the time of making the incision, a mass almost the size of one's fist issued out through the incision, and this seemed to be pulped muscle, with some old organized blood clot. When that occurred, the anterior surface of the radius appeared. At least three-quarters of the flexor muscles of the forearm were entirely destroyed. There were no muscles to act upon the tendons lower down. The tendons could be seen at the lower part with no muscles attached above. The sequestrum was a piece of bone broken off at the accident, and not a piece which had sloughed off.

Drs. Wm. Oldright, E. E. King, A. Primrose, President Grasset, A. A. Macdonald, Thos. Millman and Geo. A. Bingham participated in a very animated and interesting discussion of the cases.

Replying to the criticisms, Dr. Peters said, in reference to the left arm, no one would deny that the skin would slough. The bones are gone, and all the extensor tendons are gone. Some of the flexors are left. The tendons are there, but the muscles are crushed, while the veins remain patent throughout through the sloughing area; and in the meantime the man's life is in danger every moment. The mortality is much greater where amputation is not performed. Dr. Peters had no doubt in his own mind that the hand would have become gangrenous in the course of a few days, although the circulation was so good at the time. When swelling occurred, the inflammatory exudate would have choked the veins, and in a very short space of time the arm would have been gangrenous.

The discussion was adjourned until the next meeting in May.

Nomination of Officers for 1899-1900.—President, Dr. Geo. A. Bingham; Vice-President, Dr. W. H. B. Aikins; Corresponding Secretary, Dr. G. Boyd; Recording Secretary, Dr. George Elliott; Treasurer, Dr. W. H. Pepler. Executive Committee (five to be elected): Drs. H. B. Anderson, George A. Peters, E. E. King, H. A. Bruce, G. Silverthorn, J. T. Fotheringham, A. Primrose, A. A. Macdonald, W. B. Thistle, B. Spencer, and Geo. W. Badgerow.

GEORGE ELLIOTT,

Recording Secretary.

TORONTO PATHOLOGICAL SOCIETY.

The usual monthly meeting of the Toronto Pathological Society was held in the Biological Building, Queen's Park, on March 25th, Dr. Primrose, President, in the chair. Present: Drs. Rudolf, Silverthorn, W. J. Wilson, F. N. G. Starr, J. J. Mackenzie, H. B. Anderson, Parsons, Carveth, C. L. Starr, Hamilton, McPhedran, Wm. Oldright, Fotheringham. Visitors: Drs. Page and Sutherland.

Minutes of last meeting taken as read, and adopted.

Dr. C. L. Starr was elected member of the Society.

Dr. F. N. G. Starr presented the following communication:

The *Eustrongylus Gigas* from the Kidney of the Mink.

During a recent hunting expedition, my friend, Dr. J. M. McCallum, among other things shot a mink. Having skinned the beast some three days after death, he handed the carcass over to me. I found the animal to be plump and well-nourished, with plenty of adipose tissue. Upon palpating the abdomen the left kidney seemed to me to be larger than necessary for an animal of the size; hence I cut down upon it, but found it normal in appearance and of a large size. It measures 4 cm. At first I was unable to locate the other kidney, but finally decided that a large membranous sac-like structure, bluish in color, occupying the right renal region and lying in contact with the under surface of the liver, was all that was left of the kidney. It measures 6.5 cm. Upon section, a bloody sero-gelatinous material escaped. The wall of the sac was very thin, resembling a thickened capsule, and on its inner aspect what appeared to be remains of kidney substance could be made out. In the sac were numerous coils of the *eustrongylus gigas*, and one could observe a slight vermicular motion. There are at least two worms, for I have been able to demonstrate three extremities without interfering with the natural arrangement of the specimen. The worms are of a brownish-red color, very much like the color of fish-worms from a manure heap. You will also observe among the coils of worms a long bone-like structure, which presents numerous rib-like processes. Originally this structure probably occupied the pelvis of the kidney, these processes extending into the calices, and it would seem that these rib-like extremities extended at one time into the mouths of the papillæ.

Davaine says that the worm is found in the dog, the marten, the otter, the mink, and other fish-eating animals. It is most frequently found in Holland and in France, more having been reported from Paris than elsewhere. It must, however, be comparatively rare, for in an examination of three

thousand human subjects and of five hundred dogs it was never found. The ordinary abode seems to be somewhere along the genito-urinary tract, usually within the pelvis of the kidney or the calices, rarely in the bladder or ureter. If not in the genito-urinary tract, it is found somewhere close to it, having made its way out into the adjacent structures. Rarely are there more than two worms, usually only one, but as many as eight have been discovered. The substance of the kidney is, as a rule, destroyed. If the animal has been under observation for some time, frequent hemorrhages will be observed. The kidney will appear as a large membranous sac, and when opened a varying quantity of sanguinolent material will escape; sometimes there will be pus, when the worm, instead of appearing of a brownish-red color, will be of a dirty white. The capsule of the kidney spreads out and becomes discolored, undergoing changes which so far have not been much studied. In the pelvis a bone-like structure has been mentioned a number of times.

Leuckart describes this hardened mass as a "calcification, bone-like in appearance." Weinland, in speaking of the kidney in a case of this kind, says that there was nothing left but the "outer skin," forming a regular worm sac; while inside, besides six worms, there was a thin bone-like structure. So far as I have been able to learn, no one has, as yet, subjected this "bone-like" structure to the microscope. From my specimen, Dr. R. R. Bensley, Lecturer on Histology in the University of Toronto, took a portion which he decalcified and cut into sections. Under the microscope you will observe that it is not only "bone-like," but it is really true bone. The question naturally arises as to the origin of this bone. Of course, it is possible for bone to develop from connective tissue, as, for example, in the ossification of the tendons in a turkey's leg, and in the sesamoid bones of the human foot, or in the adductor muscles, giving rise to the "rider's bone." Bony growths, too, have been described as occurring in the testicle and kidney. In this kidney where did the osteoblasts spring from? Upon some future occasion, Dr. Bensley and I hope to make a communication to this society on the subject, for at present our investigations have not gone far enough to warrant us in expressing an opinion. Dr. Bensley also sectioned the sac-wall, and could discover no kidney substance whatever.

Stratton, of Kingston, Canada, reported a specimen of this worm found in the peritoneum of a dog. There were four living worms discovered, though the dog had been drowned through the ice several days previously. He hunted for, but failed to discover a perforation of the bowel, believing them at first to be the ordinary round worm.

Irving H. Cameron, of Toronto, has told me of a specimen in the kidney of a dog, shown to the class in physiology by the late Michael Barrett. This specimen is now in the Pathologic Museum of the University of Toronto.

Erasmus Miller, of Dorchester, U.S.A., reports finding a specimen in the kidney of a fish-eating marten.

Theo. Kerchering mentions the case of a dog where the whole length of the ureter was occupied by a worm. The animal was ill nourished, and was killed because of its constant howling.

Le Blanc describes a case of tumor in a dog near the penis, from which upon opening he removed a specimen of the *eustrongylus gigas*. He thought it had probably passed from the kidney to the bladder, and thence to the urethra. Upon reaching the canal in the bone of the penis it was unable to pass further, and then made its way into the periurethral tissue.

Van Sweiten mentions finding a specimen of the *eustrongylus* in the kidney of a dog that had suffered from pain, hematuria, and difficulty in urination.

There are a number of cases reported as having occurred in man, but Leuckart believes them to have been cases of the *ascaris lumbricoides*. If the condition should occur in man, and the worm remain in the kidney, there may or may not be any symptoms. If, however, one should pass along the ureter, the symptoms would be those of renal colic. One could arrive at a diagnosis, however, by finding the eggs in the urine. These are very numerous, and are $\frac{5}{10}$ m.m. long by $\frac{4}{10}$ mm. wide.

In the Cobbold Catalogue of Entozoa, in the Royal College of Surgeons of England, a specimen of the *eustrongylus* is mentioned. In describing it, Brooks says: "This fine female specimen (18 inches long) was found in the kidney of a patient of the late Thomas Sheldon." Maublet reports the case of a boy five years old, from whose bladder he removed a calculus. Four years later the boy suffered from anuria, with pain and swelling in the lumbar region. The urine became thick. At the end of fourteen days pus made its appearance in the right lumbar region. This was evacuated, and the wound continued to discharge for two months, when it cicatrized. Soon the region became inflamed and was re-opened. When dressing it the following day, the mother removed a large worm on the dressings, and Maublet found a smaller one. Two days later the child could not pass urine, and an attempt to pass a sound failed. The boy was put in a hot bath, when a worm made its exit from the urethra, and on the following day another passed. In one month the lumbar wound was entirely healed. At the end of five years the

patient was reported to be in good health. Duchateau reports the case of a soldier who suffered from attacks of pain and hematuria every other day for five days, when he passed half a chamber pot of blood clot and bloody urine. In the chamber was found a living worm, brownish-red in color; it measured one line in diameter, and was four inches long. The patient had lived in Holland. Aubinais related the case of a farmer aged 60, who was robust and in good health. He began to suffer from pain in the right lumbar region, from which he got no relief. In three years his obesity was reduced, and movements could be made out in the lumbar region. He finally died of marasmus, after which the flank was incised and the kidney removed. In it movements could be distinctly made out twenty hours after death. A worm 43 cm. in length was found upon opening the kidney.

Dr. Starr also presented a number of specimens prepared according to the method of Toré, and showed methods of preparation by means of formaline injection. Discussion by Drs. Anderson and Mackenzie.

Mr. J. J. Mackenzie made a further communication on the "Timothy Hay Bacillus," to be published later.

Pyo-pneumo-thorax.

Dr. McPhedran: W. M., aged 22, entered Toronto General Hospital March 7th, 1899; complained of cough, expectoration, difficult breathing. Family history unimportant. Personal history: Painter and general laborer for two years. No illness except "inflammation of the lungs" when twelve years of age, after which he caught cold very easily when exposed. Passed medical examination at London Military School two years ago. Five months ago had a sudden hemorrhage, supposed to be from lungs, and taken to St. Michael's Hospital and treated for phthisis. Remained there two weeks. While there developed a cough, which remained steadily ever after. Was not able to work when he left St. Michael's, and steadily lost strength and weight. About two weeks previous to admission to Toronto General Hospital he was exposed to a cold wind, and his cough became much worse. For several days previous to admission he complained of a dull pain in the left side in infra-clavicular and axillary regions. This pain had ceased when he was admitted.

Condition on Admission.—Temperature 101.8; pulse 130; respiration 36. Complained as before mentioned; in bed, lying on left side; face, neck and arms cyanotic, expression anxious; alae, nasi expand with each inspiration; lips pale, dry and cracked, with an eruption on lower lip. Thorax: No expansile movement of left side; left intercostal spaces bulging.

except supra and infra clavicular spaces, which were retracted. Left side: Heart impulse not seen on left side, but extended out to mammary line on right side; right side expanded freely; diminished vocal fremitus and vocal resonance on left side; increased on right side. Breath sounds: Distant tubular breathing on left side; bronchial breathing with moist and crepitant rales on right side; succussion sound on left side, when moved; percussion note tympanitic at first on left side but became much higher in pitch and muffled afterwards; metallic echo over left chest when percussed with coins. Percussion note of right side: No areas of absolute dullness but some areas of relative dullness; heart sounds weak, pulmonary second sound accentuated. Abdomen: Liver three fingers below costal margin in right mammary line; spleen palpable; sputum examined frequently for tubercle bacilli, but none found; no pneumococci found; sputum muco-purulent. Examination of urine when admitted. Clear light yellow; acid; 1020; no sugar, no albumen, no sediment. Left chest tapped Tuesday, March 14th; escape of air and 1,000 c.c. of a greenish-colored sero-purulent fluid of specific gravity 1030; cultures from fluid resulted in pure growth of streptococcus pyogenes.

Post-mortem Examination.—*Rigor mortis* marked; *post-mortem* staining in dependent parts; orifices normal. Measurements: Left chest, 18 inches; right chest, 16 $\frac{3}{4}$ inches; intercostal spaces on left side obliterated; herpes, right lower lip. Section: Fat almost absent; muscle thin, dark, red; the diastinal pleura adherent to sternum. Peritoneum: 10 ounces clear serous fluid in pelvis. Pleuræ: Left pleural cavity contains air; cavity projects over to right border of sternum; old adhesions at apex of left lung posteriorly and externally; these adhesions very strong and extend from vertebræ to post axillary line; left pleura much thickened. Right pleura: No adhesions; has lost its glossy appearance; ragged in parts and some recent lymph exudate. Lungs: Left—adherent apex and posteriorly; collapsed; small irregularly round aperture in posterior part of upper lobe 2 $\frac{1}{2}$ inches from lower margin; this opening communicated with a small cavity beneath pleura which again communicated with a large cavity; Right—28 ounces; some emphysema of anterior margin; diffuse miliary tuberculosis; some areas of broncho-pneumonia; no cavities; mucous membrane congested and slight dilatation of bronchi. Heart: Displaced to right side; apex behind sternum; right border behind right nipple; weight, 10 $\frac{1}{2}$ ounces; cavities contained a.m. and p.m. clots; right ventricle distended; some hypertrophy and dilatation of right ventricle; muscle soft and flabby; valves normal; endocardium normal; pericardium contains 6 ounces of slightly fibrinous turbid fluid; visceral pericardium

over right auricle presented a few small tubercle. Spleen: Enlarged; 6 ounces. Kidneys: Showed congestion and cloudy swelling. Liver: 65 ounces; cloudy swelling and fatty degeneration; edge $1\frac{1}{2}$ inches below c.m. in right mammary line. Small intestine: Tuberculous ulcers in lower part; small and large intestine distended with gas.

Dr. Rudolf, in discussing Dr. McPhedran's paper, said in this case there were signs of high positive pressure, *i.e.*, heart much displaced, intercostal spaces puffed out and almost a dull note on percussion. This positive pressure must have been produced by a valvular opening. It probably caused the great stretching of some old adhesions so that they have become cords.

Astragalus in Congenital Talipes—Equino-Varus.

Dr. Clarence L. Starr presented a paper on the above subject. (See page 255.)

Cerebral Hemorrhage.

Dr. H. J. Hamilton showed the brain from a case of cerebral hemorrhage with crossed paralysis.

J. M., aged 54, came into the Toronto General Hospital December 29th, with a history of having an apoplectic stroke the same day. She was unconscious from the moment the paralysis set in and remained so until her death, which took place December 31st, 1898, at 5 p.m. From her friends it was gathered that she was a hard-working, temperate woman, and that the attack was sudden, the patient almost falling on the stove. There wasn't a single premonitory symptom. Upon examination complete motor paralysis of the left lower half of the face and the whole of the right half of the body with the exception of the face, was found. There was a dulling of sensation with increase of deep reflexes in the paralyzed parts. Pupils equally normal, reacting to light and distance. Patient had retention of urine, catheterization being necessary every six hours. The bowels didn't move whilst in the hospital; there was slight arterio fibrosis; heart was slightly enlarged; urine normal, and the patient was otherwise perfectly healthy.

Autopsy.—On *post-mortem* examination the body was observed to be well nourished, *rigor mortis* well marked; heart weighed 9 ounces; coronaries rigid and arterio-sclerosis marked; the right ventricle full; the lungs are both engorged and weighed 15 ounces each; spleen small, $2\frac{1}{2}$ ounces. Kidneys: Left weighed 2 ounces, right 3 ounces; capsules adherent and cortex cirrhotic. Brain and membranes: Weight, $38\frac{1}{2}$ ounces; the left lateral ventricle was full of a semi-fluid clot; engorged vessels over the left cerebrum very marked, less so on the right; a great deal of blood welled up through the curved sulci

on the under surface of the left hemisphere of the cerebellum, the tissue of which was somewhat broken down. The other organs of the body were normal in appearance.

Drs. Anderson, Primrose, Parsons and others discussed the case, and the conclusion was that there had been a small hemorrhage in the pons, causing the crossed paralysis, and that death ensued at once after the free hemorrhage into the ventricle.

Dr. Anderson showed enlarged spleen of doubtful origin, with notes. To be published later.

Dr. Primrose showed a heart with advanced calcareous changes in the coronary arteries.

H. C. PARSONS, *Rec. Sec.*

SUIT FOR MALPRACTICE AND JUDGMENT FOR TWO THOUSAND DOLLARS.—On Wednesday morning it was published in the New York daily newspapers that an action had been closed against Dr. Thomas H. Manley, and judgment ordered in the sum of two thousand dollars, no defence being offered. It appears that a woman had brought an action against Dr. Manley, alleging malpractice in the surgical treatment of a disease of the thumb. As Dr. Manley had received no notice of the trial or date for a hearing judgment was given before a sheriff's jury in the amount claimed. Immediately after a motion was made for reopening the case, which was granted. This case is peculiarly interesting as the woman was a charity patient treated in a public institution.—*Boston Med. and Surg. Jour.*

THE PRACTICE OF MEDICINE IN ITS PROPER LIGHT.—We quote the following from the *Clinical Reporter* for February: "What are we practising medicine for? Is our profession a business or a pastime?" These are questions put by *The Medical Examiner* in an editorial that appears in its current issue in defence of commercialism in medicine. "Is our profession a business or a pastime?" Neither, essentially, my Lord! Our profession is "first, last, and all the time, a profession. Incidentally it may, in rare cases, be a pastime; it is, in most instances, a means of making a livelihood, and so far, incidentally, a business; but the relations which it establishes are relations of a peculiar personal trust on the part of the patient, not only in the skill but also in the personal honor of the physician. It is this element of personal trust which, above all, distinguishes a profession from a mere business, and which forbids all devious methods, all commercial systems of offering or receiving commissions from other professional men, specialists, etc., for cases referred. It will be a sorry day for the medical profession when the majority of its members will look upon it as primarily a business—a sorrier day for their patients! —*N. Y. Med. Jour.*

Editorials.

PLACARDING HOUSES.

The subject matter of a communication from a Toronto physician, "Sydenham," which appears in this issue, is in many respects important. On the one hand, it is a very serious matter for a family to have their house placarded in a way to indicate that diphtheria or scarlatina exists in it; on the other hand, it is equally serious, in some respects much more so, not to adopt effective methods to prevent the spread of these diseases. This will generally be accepted as a truism, but there is a great difference of opinion as to what is the best practicable method in the interests of the public.

Isolation is never thorough and never can be without taking and caring for the patient in a special hospital. There must necessarily, therefore, be some elasticity of rules or methods prescribed by the health authorities. Bread-winners in a family are generally placed under certain restrictions, but, notwithstanding the presence of infectious diseases in their homes, are allowed to mix with the outside world. The baker, the butcher, and the milkman, deliver food to the inmates of the infected houses. Under any system of inspection these privileges are sources of danger. Our medical health officers very properly endeavor to prevent and direct communication of the patient with the outer world.

Does the ugly-looking card decrease the danger of conveying infection? A large number of physicians in Toronto say, decidedly, No. It is frequently difficult to make a differential diagnosis between scarlatina and roseola, "tooth rash," "heat rash," or various forms of erythema; also between diphtheria and follicular tonsillitis, especially when no great effort is made to do so. The majority of householders have a very decided objection to the "hideous-looking thing,"—the placard—and will feel very grateful to the doctor who says, "This is a case of ulcerated sore throat; but, to be on the safe side, we will just keep Jimmie in a room by himself for a few days;" or, "I'm

not quite sure about this; it looks like a heat rash or a rose rash, but I think we had better keep him from the other children for a few days; it will probably not be necessary to report the case. Some householders, we understand, refrain as long as possible from calling in a physician for sore throat or scarlet rash on account of their dread of the card.

We would be very glad to receive and publish other communications from physicians who hold rather strong views on the subject, as we happen to know. At the same time it should be understood, we think, that the provincial and local health authorities have no desire to enact or enforce any laws that are unnecessarily vexatious to the profession and the public.

THE ONTARIO MEDICAL ASSOCIATION.

The next meeting of the Ontario Medical Association will be held in Toronto, June 13th and 14th. The President, Dr. W. J. Gibson, of Belleville, has had several conferences with the different committees, especially the Committee on Papers and Business. We learn from the Secretary that the latter committee, under the chairmanship of Dr. Jas. F. W. Ross, have nearly completed the programme, or at least the frame-work of the programme.

Certain subjects of especial interest to the medical world will be discussed at considerable length. Among these one of the most important will be "The Sanitarian Treatment of Tuberculosis." Dr. Vincent Bondich, of Boston, who has paid a great deal of attention to the subject, will open this discussion. Dr. Wilson, of Boston, has promised to present a paper on "Perforation in Typhoid Fever," which, it is confidently hoped, will elicit an extended discussion. It is also expected that Dr. Fenger, of Chicago, will open the discussion on "Surgery." Several members in various parts of Ontario have also promised papers.

The Committee of Arrangements, under the chairmanship of Dr. J. Algernon Temple, has also done some work. It is expected that a banquet will be held on the first evening of the meeting, in accordance with some by-law passed last year to the effect that there shall hereafter be an annual banquet attended

by the members, for which each shall purchase his own ticket. We regret that such a law was enacted, as the custom which formerly prevailed, viz., the entertainment of the visitors at a light luncheon by the members resident in Toronto, was generally satisfactory.

We are requested to state that it is desired that the members throughout the Province intending to present papers will forward the titles of the same to the Secretary, Dr. Harry C. Parsons, 97 Bloor Street West, Toronto, as soon as possible.

SANITATION IN SANTIAGO DE CUBA.

From a humanitarian point of view, America's war against Spain will be productive of much good to Cuba. The *Buffalo Medical Journal*, April, 1899, publishes an interesting article on the changes brought about in Santiago, chiefly through the energy and ability of Dr. Leonard Wood, who, when the war began, was an assistant surgeon, but in a very short time became a general officer. After the surrender of Santiago, Major-General Wood was appointed Military Governor of the Province of Santiago de Cuba, July 20th, 1898. At that time Santiago, we are told, was probably the filthiest city in the world. Its inhabitants were sick, starving, and two hundred of its people were dying every day. The difficulties in the way of bringing order and cleanliness out of chaos and filth were enormous. In the article referred to we find the following: "A physician who was a sanitarian, a soldier who was a disciplinarian, and a statesman who was a financier and a diplomat—all these were needed in the person who should attempt to administer the affairs of Cuba."

After four months of General Woods' administration we find, from Mr. Lewis's article in *McClure's Magazine* for March, that the following changes, with others, were effected: The population were rescued from starvation to a fair satisfaction of all their daily necessities. One of the foulest cities on earth was converted into one of the cleanest. The daily death rate was reduced from two hundred to ten. Radical reforms in many other directions were effected.

The article concludes as follows: "This unparalleled regenera-

tion had been wrought, not by a host of men native to the locality, exercising offices long established and enjoying a traditional prestige, but by an American brigadier-general of volunteers, a stranger to the place and the people, embarked in the work on a moment's notice, and having for his immediate aides only a few fellow army officers, some of whom had been out of West Point less than two years, and all of whom were as new to the situation as himself. It was the *tour de force* of a man of genius; for in the harder, more fundamental, of the tasks that confronted him here, General Leonard Wood had no previous experience." General Wood is only thirty-eight years old.

THE MEDICAL PROFESSION AND THE UNITED STATES GOVERNMENT.

We find an able and interesting editorial on this subject in the April number of the *American Gynecological and Obstetrical Journal*. The writer considers that the position of the medical profession of the United States in relation to the Government is anomalous. Although there is a Surgeon-General in the army he is simply a member of the Adjutant-General's department, bearing a great responsibility without authority to act excepting under the orders of the Secretary of War as expressed by his Chief of Staff. The unhappy condition of the troops in Cuba, and on the transports in the late war, furnishes ample evidence of the ineffective condition of the Medical Department of the army.

It is contended that the profession has corporate needs as well as corporal ones, and should be represented in the highest councils of the nation; or, in other words, the Surgeon-General, as the representative of the profession, should be a member of the Cabinet, and his appointment or election to this position should not depend upon political patronage, but rather on the recommendation of the profession of the country through its State medical societies or otherwise.

We quite agree with the opinions expressed in this article. Matters pertaining to public health, both in time of peace and of war, ought not to be under the authority and supervision of

any layman. The head of a department of public health ought, of course, to be a physician, but he ought not to be under the control of an Adjutant-General or a Minister of Agriculture. We think that in our own country our able head of this department should be a member of the Government, and should assume full responsibility for all laws governing health matters. We will watch the results of the endeavors of physicians in the United States to obtain such a condition of things in their country with considerable interest, but without any great hope for a radical change in the near future.

MEDICAL ITEMS.

Robert Muir, M.A., M.D. (Edin.) has been appointed Professor of Pathology in Glasgow University in the place of the late Professor Coats.

THE CHAIR OF OTOTOLOGY IN VIENNA.—The two chairs in otology at the University of Vienna, formerly held by Professors Gruber and Politzer, have been united into one, with Professor Politzer as incumbent, Professor Gruber having retired.

W. M. Hicks, known to some as Dr. Hicks, was fined \$25 and costs in the police court, Toronto, for practising medicine without a license. His method of treatment was to rub the patient's body, for which he charged, and to give gratis a quantity of tablets which were to be taken internally. The magistrate held that the benevolent part of Hicks' practice was simply a scheme to circumvent the law.

A CORRECTION.—I have received from the master of the Rotunda a slight correction of our paper on obstetric methods in use there. Their treatment of placenta prævia is to do bipolar version, and bring down a leg, and the cases in which it is necessary to plug the vagina first, are very exceptional indeed. In my paper not sufficient emphasis was placed on the rarity of these cases, making their main line of treatment seem secondary to that, which is only applicable to a very small percentage of cases.—K. C. M.

TRINITY MEDICAL ALUMNI ASSOCIATION.—The annual meeting of the above association will be held in the theatre of the Normal School building, Toronto, on Wednesday, May 31st,

1899. The programme of the meeting will include the names of men well known to the profession from the United States as well as from our own province. The annual banquet will be held in the evening, at which the gold medal offered by the association for the thesis of most distinguished merit, written by a graduate of Trinity and read at the general meeting, will be presented to the winner. The General Secretary is Dr. George Elliott, 129 John Street, Toronto.

CANADIAN MEDICAL ASSOCIATION.—On August 30th, 31st, and September 1st, 1899, the next annual meeting of the Canadian Medical Association will be held at Toronto, under the presidency of Mr. Irving H. Cameron. It is now some ten years since this association met in Toronto, and every effort will be put forward to make this the most successful meeting ever held. One of the most interesting features of the meeting will be the probable arrangement of the final details of a scheme whereby Dominion registration will become, in the near future, an accomplished fact. This, together with an ever growing interest in the value of the association as a promoter of scientific research, will add materially to the success of the Toronto gathering.—F. N. G. STARR, Secretary.

NEWSPAPER ADVERTISING.—We have received a communication referring to an advertisement, which recently appeared in the *Toronto Mail and Empire*, containing the opinions of certain physicians of this city about the recent influenza epidemic, together with a statement that "eminent physicians endorse and recommend ——— nerve food." The facts are as follows: A *Globe* reporter interviewed certain physicians, and published the results, without having reference to any patent medicine. The proprietors of a certain nostrum copied some extracts from the *Globe*, and mixed them with certain laudatory remarks about their specific *grippe* cure in a somewhat cunning way. Some of the physicians concerned, probably all, felt greatly chagrined and mortified, and took steps to have their names removed from the advertisement. As the matter may be brought up in the courts we will not further discuss it. We simply offer this explanation of an extraordinary (to put it mildly) use of the names and opinions of reputable physicians.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. E. GRAHAM, J. FERGUSON, T. McMAHON,
H. J. HAMILTON, AND INGERSOLL OLMSTED.

Granular Kidney.

Dr. Samuel West, in the Lettsomian Lectures (*Brit. Med. Jour.*, Feb. 11, 25, and March 11), enters into a very thorough clinical study of granular kidney. One of the first things to which attention is called is the fact that granular kidney is often found *post-mortem*, when it was not suspected during life. The general *post-mortem* frequency ranges from eleven to eighteen per cent. The tendency is for the disease to become steadily more frequent with increase of age.

Granular contracted kidneys are of two kinds: the small white and the small red kidney: or white cirrhotic and red cirrhotic. It must be borne in mind that the contracted, small, or cirrhotic white kidney does not necessarily mean a late stage of the large white kidney.

Chronic granular kidney does not include cases where the disease is on one side, which may result from obstruction to the ureters, or patchy fibrosis from gummata or infarcts, or chronic interstitial nephritis in the gout of elderly persons and in advanced atheroma. Setting these classes aside, there is a well-defined group of cases with arterio-sclerotic and renal cirrhotic characters.

The relation of granular kidney to acute nephritis is always interesting. After examining the evidence carefully, the lecturer comes to the conclusion that most cases of granular kidney must be referred to some other origin.

The arterial changes are widespread, and found in every part of the body, brain, spinal cord, eye, skin, as well as in the kidney. There are only two forms of general arterial change, namely, atheroma, and that found in granular kidney. The arterial changes in this disease are of two kinds: in the earlier period, a hypertrophic, and in the later, a degenerative, in the walls of the arteries. The hypertrophy in the arteries and heart are likely due to a common cause—some resistance in the periphery or the arterioles and capillaries. If the change in the vessels be primary, then there ought to be cases with diseased vessels before the kidneys become granular. Such cases are extremely rare, if they occur at all. No matter

whether the disease be regarded as primarily renal or in the arterioles, it should be regarded as *sui generis*, and the renal and vascular aspects studied together.

Granular kidney is a very insidious disease. The only symptom that may be noticed in the early stage is increased frequency in micturition, especially at night. This is very gradual. By the time that symptoms appear, the disease is far advanced. These symptoms fall into two groups—the cardio-vascular and the renal. The former are the earlier; and consist of heart failure and hemorrhage. The renal consist mainly of acute and chronic uremia, or better, renal toxemia.

Granular kidney is said to be disease of middle life and later, and in one sense this is true. It is, however, an extremely chronic affection, and in many cases may have commenced in early life. It is now recognized that it may begin in children.

In the early stage the diagnosis is to be made by physical signs and not by symptoms. The physical signs are high arterial tension, thickened arteries, hypertrophy of the heart and albuminuria. When these are all present the diagnosis is easy. But some of these signs may be absent. It then becomes a difficult question to decide what importance is to be attached to the remaining signs.

Vascular tension and thickened arteries develop so soon in the disease that they seem to be coincident with it; indeed some hold that they precede it. In this event vascular changes would sometimes be found without disease in the kidneys. The hypertrophy of the heart is an important sign in granular kidney in the later stages; but not so much so in the earlier, on account of the difficulty in detecting it while still slight. It must be noted that this hypertrophy is not constant, being found in from eighty-five to ninety per cent. of granular kidney cases. In many cases it has not been noted whether atheroma existed, and as this will cause hypertrophy of the heart, the value of these percentages is somewhat lost. The cardiac hypertrophy is secondary to the vascular changes, and not of the same prime importance.

Thickening of the arteries is very important. They resist pressure under the fingers, and can be rolled from side to side. When the artery is pressed by the finger so as to stop the flow through it, it still remains thick to the touch. This thickening may occur in young persons, before general atheroma is possible, and if it be not an indication of granular kidney, then there must be some other disease of the vessels with which we are not yet acquainted. This thickening may be found when nothing else can be detected, and it should arouse suspicion, for it is always pathological. When this is found, careful search will find other indications of granular kidney, or these will

develop later on. This leads to the conclusion that thickened arteries is really the early stage of the disease.

With regard to the high tension it may be remarked that in the later stages it begins to fall, and this is a bad indication. It points to neuromyolytic condition of the arteries. The high tension is favorable in granular kidney. Go back as far as we will, as soon as granular kidney can be diagnosed, there is high tension. When the tension is persistently raised it is the general opinion that it indicates the presence of the disease in the kidneys.

The question of albuminuria is one of great moment in these cases. It is usually small in amount, and often absent, but the statement made by some that it may always be absent, is very hard to prove. It may be at times abundant; but then there is some complication, as nephritis or heart failure. If we have a case of granular kidney, these variations cause no surprise, but there may be albumen, and the question is whether there is granular kidney. The person may have albuminuria and appear to be in good health. This brings us to the question of physiological albuminuria. Dr. West holds that this condition is always pathological; but he divides the condition into two forms—that from disease in the kidney, and from causes outside the kidney, as the state of the blood, or the amount of exercise. He shows that a large percentage of those with albuminuria and apparently healthy die of kidney trouble at a later period of life. It must be admitted that the presence of albumen in the urine would not enable one to diagnose granular kidney.

Another sign in granular kidney is that of albuminuric retinitis. It may be laid down as a rule that it does not occur in amyloid or acute nephritis. It is said by some to occur in chronic parenchymatous nephritis. This may be true in a rare instance, and it must be admitted that the kidney might first have been a granular, contracted one. But the fact remains that this form of retinitis is practically diagnostic of this condition in the kidneys. Further, when it does occur, with very few exceptions, the patient has not many months to live. The lesions in this form of retinitis are hemorrhages, white patches, exudations, and inflammatory conditions.

Turning from the signs to the symptoms it may be said that they fall under the headings, cardiac, vascular and toxemic.

The cardiac is in the nature of heart failure, a little palpitation and shortness of breath on exertion, or there may be pain, almost at times as severe as angina.

Cardiac symptoms are not constant, even though there is much hypertrophy. The occurrence of pericarditis is a very bad omen.

The vascular symptoms are those due to rupture and hemorrhage; those due to faulty nutrition, principally in the nervous system, through the diseased condition of the vessels; and the occurrence of aneurysm, as the lecturer pointed out that granular kidneys gave rise to this condition both in large and small arteries.

The toxicemic symptoms are chronic and acute. The chronic form is in the nature of a cachexia. There is anemia and asthenia, and may be some loss of flesh. The anemia or asthenia may be extreme, and out of all proportion to the other symptoms. This chronic toxemia may cause headaches, vomiting, neuritis, renal asthma, and epileptiform convulsions. This chronic toxemia may also give rise to a number of skin diseases, as rashes with edema and rashes without edema, or irritations.

The acute toxemia is met with in the well-known uremic attacks, manifested by fits, coma, or cerebral irritation not unlike delirium tremens. These symptoms may vary a good deal. There may be very little convulsive movement, and the coma may not be extreme. The case may resemble apoplexy, in which case the prognosis is as bad as bad can be.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

Hemophilia.

There are perhaps few disorders less amenable to treatment than hemophilia—and few for which more varied treatment has been suggested, so that we have been pleased to note in recent journals suggestions which, in the cases reported, were found useful. It will be noted that the suggestions are empirical, no fresh contributions being made to the pathology of the disorder.

In *British Medical Journal* of February 11th, 1899, Davies reports excellent results in a hemophilic family in whom tooth extraction was always dangerous, from the use of ethylchloride spray, freezing immediately the cavity from which the tooth was taken, and as he says, freezing into the cavity a hard mass of blood which acts as a tight and uniform compress. This manœuvre has never failed him, he says. In the *Lancet*, December 6th, 1898, Dodd reports a case in which the sole surviving boy of seven, who had all bled to death, and others of whose relatives had died in the same way, was suffering from a large hematoma in the thigh, the result of a slight injury. The tumor having become infected it was incised, and the resulting flow of blood could not be stopped by packing, pressure,

internal styptics, or any known measure. When death seemed inevitable recourse was had to oxygen inhalation, and after twenty-four hours the bleeding ceased and recovery was eventually complete. One would scarcely venture to suggest a *rationale* for this treatment, but the oxygen probably kept the boy alive in spite of the loss of hemoglobin till the conditions of tension and nutrition in the vessels became such that hemorrhage ceased spontaneously. The experience of the writer in the Hospital for Sick Children here leads him to hazard the suggestion that the disease is much commoner than the books would lead us to suppose, and that the hemophilic tendency is not necessarily a lifelong condition, but that it may arise in an individual, and in the course of time disappear, leaving him normal so far as bleeding goes, for the rest of his life.

Endermol—Use in the Treatment of Scabies.

Max Mollers (*Revue internationale de Therap.*) says that of sixty-seven cases of scabies treated at the clinic of Doutrelapont at Bonn, by frictions with an ointment containing 1 per cent. of endermol, sixty-four cases were cured by one application, the other three requiring six frictions. The author prefers, however, to make four applications in every case. The ointment should be left on for two days, the patient then taking a bath and changing the underclothing. The applications caused no symptoms of intoxication or irritation in the cases treated. Endermol is the salicylate of nicotine,—*Post-Graduate*.

Jambul in Diabetes Mellitus.

Smyth (*American Practitioner and News*) earnestly commends jambul to the attention of the profession as almost specific in its power of reducing the prominent symptoms of diabetes mellitus, and of improving the general condition of people suffering from this disease. He points out the fact that Stevenson and Christy demonstrated in the laboratory that jambul when mixed with starch and diastase arrests the production of dextrose, and also that Graser and Binz found that when administered to dogs in which artificial diabetes had been produced by phloridzin or by removal of the pancreas the production and excretion of sugar was reduced eighty per cent. or more. He gives a long list of well-known European practitioners who have used it successfully in their practice, and calls attention to the fact that the Hindus are familiar with it as a remedy in this trouble under the name "djocet." The author calls attention to the necessity of giving the drug a fair trial before reporting negatively upon it, of seeing that the preparation used is not made by the aid of heat or from old stock,

of observing that some other disease is not present that interferes with results, and of being sure that the seeds are from the Java jambul. If these precautions are taken and the drug used in increasing doses, he assures his readers that "evidences of its beneficial effect will appear with a rapidity that is astonishing." Two cases are cited that came under his immediate observation. The first was that of a young man, aged twenty-four, who had all the symptoms of diabetes. He had been losing flesh rapidly and passing much sugar. In four weeks he had gained fifteen pounds; the urine was reduced in quantity, and only a trace of sugar was present.—*Medical Age*.

A New Urinary Disinfectant.

Dr. R. W. Wilcox (*N.Y. Med. News*): The drug discussed by the author is known as hexamethylenetetramin, prepared by union of ammonia and formaldehyde in solution. On account of the various ways in which this substance alters urine it has been named urotropin. From a study of its action in several cases the following conclusions are presented:

1. Urotropin produces no untoward symptoms when administered in amounts of thirty grains *per diem*.

2. It renders an alkaline urine acid no matter what the cause may be.

3. It inhibits the development of microorganisms of ammoniacal cystitis and in this way clears up cloudy urine.

4. It is indicated as a preparatory disinfectant in operations upon the urinary tract; in pyelitis, cystitis and other inflammation of the urinary tract irrespective of their cause, in phosphaturia, and in other conditions tending to formation of urinary calculi.—*Post-Graduate*.

Tannoform.

Tannoform is obtained by the precipitation of an aqueous mixture of tannin and formaldehyde with hydrochloric acid. Tannoform has shown itself to be one of the best local remedies for decubitus, diabetic gangrene, and the many varieties of weeping, chronic, and acute eczemas. In all these cases it acts beneficially through its generally-admitted desiccating properties and its power of arresting secretion. As a means of combating excessive secretion of sweat on the hands and feet, in the armpits, and in other parts of the body it stands without a rival. In some cases a single application suffices to reduce the formation of a sweat to a desirable measure, and to suppress the disagreeable odor. Sweating feet are generally best treated with tannoform dusting-powder, which is a mixture of one part of tannoform and two parts of Venetian talc. Unmixed tannoform should only be used in very grave cases, when the

sole of the foot and the parts between the toes should be briskly rubbed with it. The same applies to the formation of sweat in the armpits, and at other parts of the body. In the cases of eczema and decubitus a 10 per cent. tannoform ointment has often been found to yield better results than pure tannoform. L. Hesse (*Australasian Jour. Phar.*, Oct. 20th, 1898).—*Sajous Monthly Cyclop.*

Orthoform in Toothache.

A piece of absorbent cotton saturated with an alcoholic solution of orthoform and placed in the cavity is said, by Hildebrandt, to instantly stop the pain.

The Control of Hemorrhage by Gelatin.

Lancereaux and Paulesco employ the following solution :

- R. Gelatin, $2\frac{1}{2}$ drachms ;
Sodium chloride, $2\frac{1}{2}$ drachms ;
Water, 1 quart.

This is sterilized, and from one to two ounces, which may be increased to three or four ounces, is injected underneath the skin of the thigh.

For combating the hemorrhage of tuberculosis it is stated that Huchard employs the following formula :

- R. Gelatin, 2 drachms ;
Sodium chloride, $2\frac{1}{2}$ drachms ;
Water, 1 quart.

Dissolve with the aid of heat, filter and sterilize.

Commence the injections in the quantity of one to two ounces under the skin of the abdomen. Where it is desired to produce coagulation of blood in an aneurysmal sac we may employ the following solution, which is very much stronger.

- R. Gelatin, 30 grains ;
Sodium chloride, $2\frac{1}{2}$ drachms ;
Water, 3 ounces.

Of this they give one to two ounces subcutaneously.—*Therap. Gazette.*

The Painless Treatment of Cracks in the Nipples.

At the meeting of the Paris Obstetrical Society held on November 10th, 1898, a paper was read by MM. Maygrier and R. Blondel, upon the "Treatment of Forty Cases of Cracked Nipples at the Charité Hospital." They had dressed the cracks

with orthoform, which brought about complete anesthesia during suckling and kept the cracks aseptic. The application of the powder causes only slight smarting. The infant was put to the breast a quarter of an hour afterwards and sucked eagerly, as orthoform has neither taste nor smell. The anesthesia persists for some time. MM. Maygrier and Blondel made trial of orthoform powder alone, of orthoform followed by a moist dressing of boric acid, and finally with a strong alcoholic solution of orthoform dropped into the cracks. They considered this last method the best, for it caused no more initial smarting, but it quite did away with infection of the breast, probably because the solution was able to penetrate into the recesses of the fissures.—*Lancet*.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD
II. C. SCADDING AND K. C. McILWRAITH.

The Diagnosis of Extra-uterine Pregnancy.

J. W. Taylor, in the *British Gynecological Journal*, has an exceedingly valuable paper on this subject. The diagnosis is reached from the following signs: 1. A patient within the child-bearing limits of age and one in whom pregnancy is possible. 2. She has recently been in good health. 3. It is more likely than not that several years have passed since her last pregnancy. 4. There is a history of some amenorrhea, accompanied or followed by (5) irregular uterine hemorrhage, occasionally profuse and red, but generally dark in color, moderate in amount, and persistent in its course; (6) with this there may be the history of the passage of some membrane, either in one pouch or bag as a "complete decidua," or in two pieces, or in shreds. 7. On examination, pulsating vessels may be felt in the vaginal vault on one side of the uterus. 8. On this side also, and closely investing the back of the uterus, there is nearly always a tubal tumor (this may have an exceptional situation). 9. The tumor enlarges markedly and suddenly by recurrent hemorrhages and by the formation of a hematocele directly continuous with the original tumor. 10. These hemorrhages are signalized by sudden spasms of severe abdominal pain and by transient attacks of peritonitis. 11. The uterus is displaced by the hematocele, at first backward, afterward to the opposite side of the pelvis, and sometimes forward, against the pubes (it is rare for the uterus to be permanently displaced downward); and (12) the uterus throughout, although slightly enlarged, is empty.

Danger of Curettement after Abortion.

The following is quoted from the *American Journal of Obstetrics*: While it is undeniable that a curettement in some cases of abortion is an almost indispensable operation, it is also true that it is not as simple as is commonly supposed. The danger of a curettement of a soft, friable uterus are again demonstrated in the report of a case of Dührssen. In a case of abortion, pieces of placenta were retained in the uterus, which Dührssen and another physician attempted to remove with the curette. The placenta, however, was so firmly adherent that the operation was suspended and the uterus tamponned with iodoform gauze. Forty-eight hours afterward the tampon was removed; it was then possible to introduce the finger within the uterus and remove the particles of placenta. At the same time discovery was made that there were defects in the uterine wall, and as there was also considerable bleeding, it was deemed advisable to remove the uterus per vaginam. The examination of the extirpated organ showed that portions of the uterine wall were removed by the curette. Such an accident in the hands of so competent an operator as Dührssen should, if nothing else, lead to the exercise of the greatest care in curetting the puerperal uterus.

The Dissection and Liberation of the Sphincter Ani Muscle.

The February number of the *Johns Hopkins Bulletin* has an article on this subject by H. A. Kelly, M.D., Gynecologist-in-Chief, the Johns Hopkins Hospital. After giving a review of the literature of the subject and describing and illustrating his own method Dr. Kelly says:

The first essential difference between my own method and those of previous operators is a carefully conducted denudation, giving the sphincter a wider berth, so as to separate it from the skin surface, after all the parts have been brought into apposition, by a greater interval. This is done to make the burial of the catgut sutures a safer procedure.

The next important point is the dissection and liberation of the sphincter ends until one, or one and a half centimeters, or even more are pulled out free on each side. This has not been proposed before. The ends are then cut off so as to remove the scar tissue and then interrupted catgut sutures passed through them so as to be ready to bring them snugly together at the proper time.

The rectal wound is then completely closed by a series of interrupted sutures passed close together so as to make it impossible for any minute particles of fecal matter to press between the stitches and cause an infection. This closure is

carried down and over the anus on to the skin area, and then, only after this step is satisfactorily completed, are the sphincter ends brought together and the buried catgut stitches tied. Another point which I wish to urge, and which differs from any previous proposition, is the passage of a silkworm-gut tension suture directly through the substance of the sphincter muscle halfway between its inner and outer borders. The purpose of this suture is to take tension off the buried catgut sutures during the healing process. I prefer this suture to the Emmet tension suture which is passed well behind the sphincter ends on the skin surface, because my suture acts more directly and does not tend to make the anal orifice so small; it is, therefore, easier to secure earlier and regular defecation.

I have dwelt thus far upon the method of securing immediate union of the external sphincter muscles, it is my desire now, in conclusion, to insist upon the importance of paying equal attention to securing accurate approximation of the internal sphincter muscle. Indeed, if I would establish any comparison between the two, I would attribute more importance to the accurate union of the internal sphincter than to that of the external. This must be effected in the following manner: One or two fingers are passed into the torn bowel and then the septum is brought slightly forward, while with a knife or a pair of scissors the operator splits the septum on its mucous margin and then dissects upwards and inwards, separating the vagina and its column from the septum in such a way as to isolate the rectum in front and on the sides. By taking a little care and observing the tissues closely, the bowel with the muscle is easily set free, and if the dissection is well done the internal sphincter fibres will be clearly recognized on both sides.

After all the scar tissue is removed the internal sphincter is then united by a series of interrupted fine silk sutures entering and emerging on the mucous surface of the bowel about a millimeter from the edge of the cut. These sutures are passed and tied from above downwards from $1\frac{1}{2}$ to 2 mm. apart.

I believe it best to reinforce these rectal sutures by two or three catgut sutures buried in the septum above them and grasping the muscular coat of the bowel, that is to say, the internal sphincter, and drawing it together over the line of union established by the first set. After doing this the external sphincter is brought together as described above, and the remaining perineal and vaginal portions of the wound united as described in the text-books. The utmost care must be taken throughout not to leave any dead spaces in the septum or about the buried sutures.

After such an operation it is my practice to open the bowels,

at least every other day, by giving a warm oil injection through a soft catheter.

Ectopic Gestation.

In the matter of ectopic gestation Fernand Henroten, writing in "Jewett's System of Obstetrics," says :

General Considerations.—Surgery offers the only treatment of value in ectopic gestation prior to the fourth month. In exceptional cases operation is not advisable. *When the patient is moribund*, operation is useless. *When the patient is recovering*, watchful expectancy may be all that is necessary. A blighted ovum can unquestionably be absorbed. The patient may not come under observation until recovery is well under way. If a mass, the character of which is undoubted, is painless on palpation, is known to be decreasing in size and is becoming firmer in consistency, and if the patient presents no symptoms, under such circumstances operation would be meddlesome interference. *When the diagnosis is obscure* the ovum may be expelled through a patent ostium abdominal into the general peritoneal cavity and be there absorbed, or it may perish and be absorbed *in situ*, or intra- or sub-peritoneal rupture may take place and the symptoms not be sufficiently marked or severe to establish a diagnosis or to demand exploratory incision.

In the same work Whitridge Williams writes :

Third stage of Labor.—Excepting severe hemorrhage and cases of adherent placenta there is absolutely no indication for introducing the hand into the parturient tract. And I believe that the frequency of adherent placenta is very grossly overestimated, and in many cases its occurrence is due to the injudicious employment of Credé's method, which, in the vast majority of cases, is not necessary. The writer's practice is to watch the fundus of the uterus by placing his hand gently upon it, but not kneading it. After the lapse of 10 or 15 minutes, as a rule, we notice that the fundus rises about 5 cm. towards the umbilicus; this means that the placenta has been detached from the uterine wall and has been expelled either into the lower uterine segment or into the vagina. Under these circumstances it is ready for expression, the body of the uterus being simply used as a piston to force the detached placenta through the vagina.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, H. B. ANDERSON AND J. AMYOT.

Blastomycetes as Sources of Infection of Malignant Tumors.

Maffucci and Sirleo, of the Institute of Pathological Anatomy at Pisa, conclude (*Zeitschrift f. Hygiene u. Infektionskrankh.*, Bd. xxvii., H. 1) that though the origin of malignant tumors from infection is not yet demonstrated, many such tumors do so arise. Certain blastomycetes have proved to be of pathological importance; the processes which up to the present they have been found to set up, in animals and human beings, have been septicæmia, suppuration, and chronic inflammatory new growth of the type of granuloma, and in anatomical construction not in any way resembling carcinoma or sarcoma. In animals liable to cancerous new growths blastomycetes taken from human cancer have as yet caused only ordinary inflammation. The presence of blastomycetes cannot always be demonstrated in human carcinoma or sarcoma by histological examination or cultivation; more easily found in malignant melanotic tumors, their topographical distribution then indicates that the infection has supervened on the tumor. That blastomycetes may cause cancer or sarcoma is possible, but has not been proved; and while the growth of papilloma, due to coccidium, shows that psorozoa may be the origin of new growth, no experiment has yet shown that they can cause cancer or sarcoma in animals capable of such growths. Research for the infectious causes of tumors should not be limited to any one class of parasite.—*Brit. Med. Jour.*, November 19th, 1898.

Tuberculous Endocarditis.

Michaelis and S. Blum, of v. Leyden's clinic (*Deut. Med. Woch.*, September 1st, 1898) have succeeded in setting up a tuberculous endocarditis in rabbits. The authors first refer to the researches which proved malignant endocarditis to be a microbic origin. At one time it was thought that endocarditis and tuberculosis were mutually exclusive until morbid anatomy demonstrated that these two lesions might occur together. Thus out of Fromholdt's 277 cases of valvular disease 22 or 8 per cent. had phthisis. In such cases it might happen that the valvular disease occurred first and the phthisis followed, or that the endocarditis had supervened upon the phthisis. The bacteriological examination is obviously of much importance here. In some cases the streptococcus and staphylococcus have been found in the endocarditis occurring in phthisis, and more recently the tubercle bacillus. Thus in three consecutive cases of phthisis with endocarditis v. Leyden found the tubercle

bacillus in the vegetations. Michaelis and Blum set up aortic incompetence in rabbits by piercing the valves with an instrument introduced through the carotid. In about two hours later the tubercle bacillus was injected into the vein of the ear. The animal died in from three to six weeks. Besides a diffuse tuberculosis the heart was hypertrophied and dilated. The valves which had been damaged were covered with soft vegetations. The tubercle bacillus was demonstrated in them, sometimes in large and sometimes in smaller numbers. The staining of the tubercle bacillus in sections is not always quite an easy matter, and perhaps this will account for some of the negative results which have been obtained. The author's experiments show that the tubercle bacillus can by itself set up a verrucous endocarditis.—*Brit. Med. Jour.*, November 19th, 1898.

Obstructive Jaundice in Children.

Henry Ashby records two extremely interesting cases—fatal—of the above condition. Both patients were girls—one of five years of age, the other of seven. In neither was the family history or previous personal history of any special account.

CASE 1.—Aged 5; became jaundiced when convalescing from whooping-cough; constant pain in belly; edge of liver two inches below ribs; urine and stools as usual in jaundice; five weeks after admission to hospital began to pass blood from bowel; this kept up with increasing anemia till death four months after admission, and seven after onset of jaundice. Temperature ran from 97° to 101° F.; no ascites.

Post-Mortem.—Liver large, dark green, no cirrhosis; lymph glands of fissure of liver, large, soft, hemorrhage; gall-bladder small, no gall-stones; common duct surrounded by dense fibrous tissue, difficult to trace to duodenum; admitted small probe through the papillæ, and then grasped it firmly; pancreas, especially the head, indurated; duct normal. Cause of death, large hemorrhage into intestine.

CASE 2.—Aged 7; jaundice for three years before death; stools as usual; nausea frequent; swelling of feet and abdomen. Color, green; swelling of abdomen marked. On admission to hospital, emaciation marked. On withdrawing ascitic fluid from abdomen a large cyst was found on right side, lifting up the liver. Sixteen pints of green mucoid fluid withdrawn from cyst by tapping. In next three months cyst tapped ten times, eight to ten pints of similar fluid being withdrawn each time. Cyst opened and drained; great improvement. Attempt to unite cyst to duodenum; death on second day from peritonitis.

Post-Mortem.—Showed liver evenly enlarged; capsule thickened; adhesions to diaphragm and spleen; sections lobulated;

color, greenish yellow. The cyst adherent to under surface of liver was the hugely distended common duct, including cystic duct and lower end of gall-bladder; hepatic duct opened into cyst. No communication with duodenum; spleen large and indurated.

Note, in Case 1, obstruction without any dilatation of duct; and in Case 2, obstruction with great dilatation of common duct.—*Manchester Chronicle*, November, 1898.

Hysterical Paroxysmal Edema.

F. H. Edgeworth, M.B., Assistant Physician Bristol Royal Infirmary (*Bristol Medico-Chirurgical Journal*, September, 1898) records an interesting case of the above obscure disease, the history being as follows:

Male, aged 24. Plumber by trade; no family or previous personal history with any apparent bearing on the case. Came to Bristol Royal Infirmary June 9th, 1896, complaining of swelling of left arm and foot; first attack eleven years before; might go to bed well, and in the morning find a foot or arm swollen; swelling so great that he could not put on a boot if foot affected; swelling lasts all day, and then gradually subsides; burning, itching pain in the red and swollen part. At first could not indent the edematous part with the finger; as it subsided, could do so. Attacks at first separated by, say, a month's interval; latterly not farther apart than a week. Any part of body might be affected, hand, arm, leg, face (often), trunk (rarely). Usually but one part swollen at once; if two parts, on the same side commonly. Health otherwise perfect. Examination showed no anesthesia, analgesia, or thermo-anesthesia; no hysterogenic zones found; reflexes of all kinds normal.

Diagnosis.—Vaso-motor neurosis of cerebral and probably cortical origin. Arsenic was exhibited, and apparently effected a cure.

Lung Gangrene—Smegma Bacilli.

Pappenheim (*Berlin. Klin. Wochenschrift*, No. 37, 1898) records the finding in sputa a bacillus which, giving tinctorial reactions for bacillus tuberculosis, was set down as such, and diagnosis made accordingly.

Post-mortem examination demonstrated the presence of pulmonary gangrene, without tuberculosis. Further tests showed that the smegma bacillus, or a smegma-like bacillus, had been mistaken for the bacillus tuberculosis. It is well known that the bacilli of this class occur in the mouth. The case was clearly one of aspiration pneumonia with gangrene, the bacilli being present most likely as a contamination.

The danger of a mistaken diagnosis in such cases is not slight, and the necessity of a ready means of differentiating the organisms urgent. It is said by some that treatment of cover-slips after staining by fuchsin with hydrochloric acid and alcohol will always make the proof if properly carried out. Smegma bacilli cannot hold the fuchsin for longer than three or four minutes in presence of the acid alcohol, whereas tubercle bacilli do not lose the stain for a considerably longer period.

Value of Negative Cultures after Diphtheria.

In a short paper addressed to the President of the Boston Board of Health, Hibbert W. Hill, M.D., Director of the Board's Bacteriological Laboratory, shows the necessity for more than one negative culture from diphtheria patients before they are declared non-infective. His deductions are based upon some 1,200 examinations, two negative cultures being exacted before release was granted. Dr. Hill's figures prove that 35 per cent. of the releases would still have been infective had they been released after the *first* negative culture.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Tracheocele.

J. Park West (*Archives*, April, 1899) reports the following case: A child, twenty months old, who has always been healthy and whose parents are healthy, when fifteen months old was noticed to have a swelling one-fourth inch in diameter a little to the left and just below the level of the larynx. At the time it was first noticed it would occasionally disappear; later it would disappear only on deep inspiration, but now it never completely disappears. It has grown rapidly for the last two months, and is now as large as a hen's egg on the left anterior neck, just above the clavicle, well separated from the larynx and trachea. It feels soft, but becomes hard and tense when the child cries. Continuous pressure will cause it to disappear, and then a thin, smooth membrane one-eighth of an inch thick can be felt. On prolonged expiration, as in crying, it is very much increased in size, and two more swellings connected with it appear. The opening in the trachea can be felt. Very few authentic cases have been reported. The author has found fifteen cases only recorded.

Polyuria and Incontinence as Symptoms of Adenoids.

Francis Huber (*Archives*, April, 1899) calls attention to the following symptom group: Dryness of the tongue and mouth,

parched lips with great thirst; urinary incontinence night and day. The parents are distressed and annoyed by the frequent demands for water, particularly after a few hours' sleep or on rising in the morning. The children are generally anæmic, have headaches, cardiac palpitation and sometimes night terrors. Listless and apathetic, they appear backward, with the usual facial expression of mouth-breathers. Urinary examination is negative. If adenoids are recognized and removed, all the symptoms will gradually disappear, especially if good tonic treatment is at the same time adopted. The relationship of cause and effect is apparent. He offers an explanation of the mental backwardness in the excessive carbon dioxide in the blood, and the interference with the blood and lymph circulation in the brain by the obstructed nasal respiration. These children are lacking in general innervation. They do not pay attention to their wants, and as the higher inhibitory centres are less acute, the bladder reflex is not respected, and incontinence results.

Black Tongue.

William S. Gottheil (*Archives*, April, 1899) describes a case in a boy two years old. Excepting the condition of the tongue, the child is now and always had been perfectly healthy. The tongue had been cleaned several times by medicine, but the color had returned in a few days. The centre of the dorsum of the tongue was occupied by a dark greenish-black streak, beginning abruptly in front of the circumvallate papillæ, and extending almost to the tip. It was three-fourths of an inch wide posteriorly, narrowing toward the tip of the organ. The rest of the tongue and the buccal cavity were normal. The black streak was slightly elevated, looked gelatinous, and its margins were abrupt; the color was most intense in the centre of the streak, and faded towards the margins. Among the scrapings were found peculiar structures, so numerous that they must be looked on as etiological factors. They lay in dense masses and heaps on the slide. Under the microscope they appeared as large, irregularly oval, semi-transparent bodies, showing a faint grey color. There were no pigment granules in them. Occasionally they were found rounded, apparently encapsuled and stratified; they were unconnected with each other, and there was no mycelium. These cases are generally associated with hypertrophy of the filiform papillæ, and hence the affection was called hairy tongue, or black hairy tongue. Numerous observers have found many different forms of fungi, and several have described a mould similar to the above. The affection is harmless, and only causes slight discontent. It is of interest from its variety.

Correspondence.

PLACARDING HOUSES.

Editors PRACTITIONER AND REVIEW :

SIRS,—You will permit me to call attention to the question of placarding houses where there is diphtheria or scarlet fever. I am satisfied that this practice is a bad one. It can do no good, unless as a warning to others that one of these diseases is in the house so ticketed.

In the first place, many cases of mild scarlet fever and diphtheria are not reported, because of the objection to having the house placarded. I think it is not saying too much to state that in many cases, where these diseases appear to be mild, and yet the parents are fully aware of their nature, they do not call in a doctor, as they object so strongly to the placarding system. In these cases the children are around in a short time, and out amongst others, though still in a condition to infect them.

As a warning to others, it is of no value. Children will not visit in these houses though there be no placarding. People that have no acquaintanceship with the family will not be calling, and those who have will know. I am sure that as good results were obtained when the houses were not designated.

It must never be forgotten that when too stringent measures are introduced against an evil they always tend to defeat their own object. This is just what is taking place in Toronto in the cases of diphtheria and scarlet fever.

We all know how dangerous whooping-cough is to infants, and yet the disease is not even reported. No notice is taken of it, and yet it ranks third as a cause of death among children. In our desire to be doing something we are doing foolish things—and injurious things.

Yours, etc.,

SYDENHAM.

Personals.

Dr. F. J. Shepherd, of Montreal, visited Toronto April 4th.

Dr. T. Bedford Richardson, of Toronto, has removed to No. 10 Carlton Street.

Drs. J. W. Bruce Smith and Ingersoll Olmsted visited Toronto, April 22nd.

Dr. Edmund J. Kelly left Toronto April 5th for Edinburgh, where he expects to take a post-graduate course.

Dr. Oronhyatekha, of Toronto, returned to his home April 5th, after a two months' trip to Egypt and Palestine.

HON. DR. MONTAGUE left Ottawa, April 17th, for British Columbia, and expected to return in about three weeks.

Dr. J. T. Duncan, of Toronto, sailed from New York for England, April 15th. He will return in five or six months.

Dr. Stirling, of Montreal, visited Toronto April 1st, and was the guest of his brother-in-law, Dr. A. Primrose, for a few days.

Dr. Lesslie M. Sweetnam had a slight attack of *la grippe* which confined him to his house for a few days. He left home April 15th and went to Baltimore, where he remained a week.

DR. GEIKIE, of Toronto, after a visit to the Home for Consumptives, in Gravenhurst, returned to his home April 15th. He was very much pleased with the character of the work done in that institution.

Dr. Rowland F. Webb (Toronto, 1897), who was for some time house physician in the W.B.A. Hospital, Grand Rapids, went to Florida in the latter part of March as private physician to a wealthy American gentleman.

Dr. W. Harley Smith had a severe attack of septicemia from absorption of poison in a slight wound of the finger. His condition was considered serious for some days, but we are glad to state that he is not only out of danger but rapidly recovering.

Dr. George R. McDonagh returned to Toronto April 5th after taking a very enjoyable trip with his brother, Mr. Jack Mc-

Donagh. They sailed from New York, January 24th, visited Gibraltar, Algiers, Italy, Egypt, Palestine, Constantinople and Greece.

Dr. Henry T. Machell, of Toronto, was injured by a fall from his bicycle, April 16th. He was riding along College Street on the "devil's strip," and in turning to pass to one side the front wheel was caught by the rail, and the doctor was thrown violently on the pavement. His head and one hip were injured. He suffered from shock for a couple of hours, and afterwards from pain in the region of the hip joint. He was confined to his house for a few days, but at the time of writing is recovering rapidly.

Dr. Drummond, of Montreal, who has been called the "Robert Burns" of Canada, was entertained by the National Club of Toronto at a banquet, April 5th, 1899. In response to the toast of the evening, "Canadian Literature," Dr. Drummond referred especially to the French-Canadians and their influence in connection with the growth of the Dominion. On the following day Dr. Drummond was entertained at luncheon at the Toronto Club by Dr. Jas. F. W. Ross, who invited a number of local physicians to meet the "Habitant" poet.

BIRTH.

SISLEY.—Mrs. Euston Sisley, Maple, March 15th, 1899, a daughter.

MARRIAGES.

SMITH—DUNN.—Dr. George B. Smith, Toronto, to Miss Eva Dunn, March 29th.

MALCOLMSON—BEACH.—Dr. G. H. Malcolmson, Calgary, N.W.T., to Miss Beach, April, 5th.

DEATHS.

BRADD.—Only son of Dr. F. J. Bradd, Peterborough, April 12th, aged 16.

RANNEY.—Youngest daughter of Dr. Malcolm Ranney, Georgetown April 14th.

Obituary.

DR. JOHN CLARKE.

Dr. Clarke, of Peterborough, died at his home, April 12th. He contracted a chill a few days before his death, and acute nephritis is said to have been the cause of death. He graduated in 1872.

DR. HENRY P. MACKLIN.

Dr. Macklin, Medical Health Officer of Lewiston, Mich., died at the home of his father, Mr. Henry Macklin, London, Ont., August 14th. He graduated in 1891.

SAMUEL DOMINION DAY, M.B.

We have to announce with deep regret the death of Dr. S. D. Day, which occurred at his home in St. Thomas after a prolonged illness. He received the degree of M.B. from the University of Toronto in 1891.

FRED. MORSON, M.R.C.S. (ENG.).

Dr. Morson, father of Judge Morson, of Toronto, died at the residence of his daughter, in Toronto, April 22nd, aged 91. He was born in England and came to Canada in 1852. After practising for seventeen years in Montreal he retired from active work, and removed to Niagara, where he resided until last autumn, when he came to Toronto.

MR. STANLEY CHARLTON.

The death of young Stanley Charlton, a first-year student in medicine in the University of Toronto, was a great shock to his fellow-students and numerous other friends. He was a son of W. A. Charlton, M.P.P., for South Norfolk. An appendicectomy was performed on him a little more than a year ago. A few months ago he had a severe illness from obstruction of the bowels, as it was supposed, but temporarily recovered. Severe symptoms appeared again a few days before his death. An abdominal section was performed April 23rd, and recovery was looked for, but he did not rally, and death came the following day. He was a good student, and it was generally expected that he would be the first prizeman in his year at the coming examinations.

Book Reviews.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsome bound in cloth, 490 pages, twenty-eight illustrations and three colored plates. Philadelphia and New York: Lea Brothers & Co.

The list of contributors to this first volume, issued in March, 1899, forms perhaps the best guarantee as to its excellence. They are A. D. Blackader, of Montreal, on Diseases of Children; J. Chalmers Da Costa, on Surgery of Head, Neck, and Chest; Ludvig Hektorn, of Chicago, on Pathology; W. S. Thayer, of Baltimore, on Infectious Diseases, including Croupous Pneumonia (note this title); A. Logan Turner, of Edinburgh, on Laryngology; R. L. Randolph, of Johns Hopkins, on Otology.

The advent of a work such as this every three months must inevitably be a help to every practitioner wise enough to buy it. It has advantages over the annuals of the same kind, occupying indeed a different field, and not really rivalling those excellent works. The index is very full and helpful.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A.M., M.D., Professor of Ophthalmology in the Jefferson Medical College; Professor of Diseases of the Eye in the Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia Hospital, etc. With 255 illustrations and two chromo lithographic plates. Price: \$4 cloth; \$5 sheep or one-half morocco. Philadelphia: W. B. Sanders, 925 Walnut Street, 1899.

This third edition is an improvement on the two previous editions, each one of which was deserving of high praise. It is very complete in every detail, and shows most careful attention in regard to every subject. The whole arrangement is excellent. The style is clear, thereby making the descriptions of the different subjects easily to be understood. The great care regarding details should strongly recommend it to the general practitioner; for the absence of this care in some works on the eye is very annoying and dissatisfying. Also the generalizations are comprehensive, and

there is thus given a view of ophthalmology so complete that the reader receives a broad and accurate conception of the specialty. I can, without hesitation, recommend this edition as in every way certain to be most satisfactory to the reader. No particular part has been selected for especial notice, for in every way the work is thoroughly up to date, and should receive every patronage by the medical profession. The type and illustrations are good. It is certainly one of the very best works on the science of ophthalmology.

An Essay on the Nature and Consequences of the Anomalies of Refraction. By PROF. F. C. DONDEERS. Edited by CHAS. A. OLIVER. Philadelphia: Blakeston, Son & Co. 1899.

This little work is an admirable digest of Donders' classical treatise and will be welcomed by students of refraction. It states clearly and explicitly the points under consideration and will prove a valuable addition to the oculist's library.

An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. DE SCHWEINITZ and B. ALEX. RANDALL. Philadelphia: W. B. Saunders. 1899.

This exhaustive work has been compiled by some sixty collaborators, most of them leading men in the United States in their departments. It is, perhaps, sufficient to say that this work justifies their reputations. The book is a first-class compilation, and contains much new and original matters. The illustrations are excellent and contain many new ones. The new operations and remedies are carefully discussed and the indications are clearly pointed out. The work is one we can strongly recommend to students and practitioners in these departments of medicine.

Sajous Annual and Analytical Cyclopedia of Practical Medicine. Subscription entire series only. Six volumes; one every six months. Cloth, \$5.00; half Russia, \$6.00. Monthly supplements sent free during the three years. Philadelphia: The F. A. Davis Company. Second volume, Br—Di.

A volume that is so extensive, that it contains references to every medical subject between Br. and Di. is very difficult to review. The second of this admirable series is to hand, and while some of the references are necessarily short, others are very long and complete. We are not able to point out any

omission within the range given. We note with great pleasure and instruction the exhaustive article on "Cholelithiasis," by Dr. J. E. Graham, which is a classic on the subject. It occupies twenty-one pages of the volume, and deals with both the surgical and medical aspects of the condition. All of the articles are arranged uniformly, dividing the advances year by year, enabling the reader to keep in touch with each subject in its chronological order of advancement. The article on "Diphtheria," by Drs. Northrup and Bovaird, of New York, is well worth the price of the volume. These articles are monographs in themselves, and are ready references to all points. We are unable to refer to other articles, and do not pick the above from the hosts of others, excepting for their common occurrence and general interest. One of the greatest advantages of this series is that a monthly cyclopedia is issued conjointly with the series, and keeps current literature on all subjects thoroughly reviewed, so that at the end of each year the subscriber has a complete review of the literature to be bound, and go with the series. This is a venture that deserves the hearty support of the profession, and the busier the practitioner is, the more reason he has for having this series on his desk.

The Pocket Formulary for the Treatment of Disease in Children. By LUDWIG FREYBERGER, M.D. Vienna; M.R.C.P. Lond., M.R.C.S., Eng.; Clinical Assistant Hospital for Sick Children, Great Ormond Street, London. London, W.C.: The Rebman Publishing Company. 1898.

This is a well gotten up book of 208 pages, and bound in leather. Its object is to give concisely all the information required as regards the treatment of disease in children by drugs. The drugs are arranged alphabetically in the front of the book, and the diseases in the last part. As an example of his method take atrop. sulph. The information given is under the following arrangement:

Properties.—White crystalline powder or crystals; soluble in 1 part of water and three parts of alcohol; taste bitter, etc.

Use.—Used hypodermically and internally as an anhydrotic and cardiac sedative; externally as a powerful local anodyn and mydriatic.

Therapeutics.—Useful in the treatment of convulsions, tetany, tetanus and trismus neonatorum, enuresis nocturna, and night sweats. Infants do not bear atropine as well as belladonna.

Dose.—Internally, gr. $\frac{1}{100}$ for one-year old child; externally, $\frac{1}{4}$ to 1 per cent. sol. or 1 per cent. ointment; hypodermically, gr. $\frac{1}{500}$ for a child one year old, and so on.

Incompatibles.—Alkalies, tannic acid, etc.

Correction of taste.—The taste of gr. $\frac{1}{100}$ is covered by \mathfrak{M} v. of syr. amantü or lingiberis.

Formula.—Two typical prescriptions are given, antagonists and antidotes.

Transactions of the College of Physicians of Philadelphia
Third series; volume the twentieth; January, 1898, to December, 1898.

The most important part of the "Transactions" this year is the number of papers on the subject of "Typhoid Fever." One deals with operative interference in the case of perforation and of appendicitis complicating typhoid, and two with the Brand method of treatment. The latter subject is given a most exhaustive review by Drs. H. A. Hare and J. S. Wilson, and their papers are ably discussed. To the surgeon, also, there are many papers of interest. "One Hundred Abdominal Operations," "Anomalous Positions of the Colon," "Fractures of the Internal Condyle of the Humerus" being among them. The book is a valuable contribution to medical literature.

Saunders' Pocket Medical Formulary. With an Appendix containing porological table; formulæ and doses for hypodermic medication; poisons and their antidotes; diameters of the female pelvis and fetal head; obstetrical table; diet list for various diseases; materials and drugs used in antiseptic surgery; treatment of asphyxia from drowning; surgical remembrancer; tables of incompatibles; eruptive fevers; weights and measures, etc. By WILLIAM M. POWELL, M.D., author of "Essentials of Diseases of Children," etc., Philadelphia. Fifth edition. Philadelphia: W. B. Saunders.

This little book is the most compact and handy work of its kind, containing, as it does, a vast amount of useful information in a very small space, so arranged that it can be referred to in a moment. The author has taken great pains to bring it up to the present time, and to eliminate all but the essentials. The new formula will be found most useful. The dose-table has been brought into conformity with present usages.

The section on drugs and materials used in antiseptic surgery will be found most convenient.

In fact, the little book is full of accurate information, is of convenient size, well printed and nicely covered. It will be an accurate guide and useful book for the purpose intended and altogether is a credit to the author and publisher.

Essentials of Bacteriology: Being a concise and systematic introduction to the study of micro-organisms for the use of students and practitioners. By M. V. BALL, M.D., Bacteriologist to St. Agnes' Hospital, Philadelphia. Third edition, revised, with 81 illustrations, some in colors, and five plates. Philadelphia: W. B. Saunders, 95 Walnut Street. 1897.

A mere condensation of large reference books, which in the process has retained much that is useless and spoiled that which might have been useful. With neither wit nor judgment in selection the compiler has sent forth a volume which is anything but what the introduction claims it to be.

When shall teachers realize that by pandering to the "loafer" they are ruining student and lowering profession?

The Ready Reference Hand-book of Diseases of the Skin. By GEORGE THOMAS JACKSON, M.D. (Col.), Professor of Dermatology in the Woman's Medical College of the New York Infirmary, and in the Medical Department of the University of Vermont; Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York; Member of the American Dermatological Association and of the New York Dermatological Society. With seventy-five illustrations. Third edition, revised and enlarged. Lea Brothers & Co., New York and Philadelphia. 1899.

The fact that the first edition of this book appeared in 1892, the second in 1896, and the third in 1899, indicates that the work has been well received by the medical profession, and has given the author an opportunity to increase its value, not only by revising many of the sections, but also by adding descriptions of recently described diseases, such as Blastomycetic Dermatitis, X-Ray Dermatitis, Bulpiss, etc.

The general plan of the work—the arrangement of diseases alphabetically—remains the same, and forms in our opinion the principal objection to the book. We believe that the first principle in teaching any branch of medical science is to place before the student the best possible classification founded on a pathological basis, and we therefore could not recommend this work as a text-book for undergraduate students. Still, it has many commendable features. The illustrations are better and more numerous than those which are generally found in a volume of this size. The author's method of describing the symptomology is quite clear and satisfactory, and his treatment is both rational and practical. The appendix contains a long list of prescriptions which have been tried and proved of value by dermatologists. The volume, taken as a whole, can be safely recommended to physicians and will prove a very useful reference hand-book.

Fractures and Dislocations. By PROF. DR. H. HELFERICH, of Griepswald. Illustrated with sixty-eight plates and 126 figures in text, drawn by B. Keilitz. Translated from the third edition (1897) with notes and additional illustrations, by J. Hutchinson, jun., F.R.C.S., Surgeon to the London Hospital. 162 pp., 8vo. Price by subscribing for 1898. Annual subscription \$5.72, postage free. London: The New Sydenham Society. Publisher, H. K. Lewis, 136 Gower Street, London, W.C.

The New Sydenham Society completes its fortieth year with 1898. The volumes of this year are "Lexicon of Medical Terms" (twenty-fourth part), "Atlas of Pathology" (Fasciculus XII., Hodgkin's Disease), and the work under review. The volume requires very little introduction; it is indeed a classic. The text is written in a most fascinating manner; the illustrations are far superior to the average, while the skiagraphs are gems, all strikingly illustrative of the subject under consideration. The author treats all fractures as complicated or uncomplicated, which greatly simplifies matters, and abandons the terms simple, compound, and comminuted. The complicated fractures are those in which other tissues than the bones are involved. The fractures are of course presented in their numerous conditions, from the incomplete or greenstick to the different degrees of complete fracture.

The author "strongly recommends the more frequent use of anesthesia in suspected cases of fracture." This we consider of great importance. The true condition is arrived at without inflicting unnecessary pain to the patient, and without the resistance that the painful manipulations are bound to occasion. Great stress is laid on the completeness of examination. Cases of fracture being reduced while dislocations were overlooked are cited, and the subsequent discovery is very unpleasant to the surgeon in charge. The whole work is complete and a great addition to any library.

The advantages of belonging to the New Sydenham Society are not well known to the practitioners in Canada. We append some general information. The subscription is one guinea annually, in Canada \$5.73, including postage, to be paid in advance to Mr. H. K. Lewis, the society's agent. Members who subscribe for the current year and not fewer than three past years at the same time, will be allowed to select volumes from the surplus stock to the value of one guinea without additional payment. Arrangement have been made by which new members can obtain single volumes, or sets of volumes, from the society's stock in hand. Some of the volumes, of which a larger surplus exists than others, can be purchased at fixed prices. The society's agent is empowered to make special

arrangements with new members who may wish to obtain any of the past volumes. The society's works are supplied free of cost to any address in Canada for the yearly subscription of \$5.73.

Chemistry. General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopeia; a Manual of the Science of Chemistry and its Application in Medicine and Pharmacy. By JOHN ATTFIELD, F.R.S., Ph.D., (Tübingen) F.I.C., F.C.S. For thirty-four years Professor of Practical Chemistry to the Pharmaceutical Society of Great Britain, 1862 to 1896; formerly Demonstrator of Chemistry at St. Bartholemew's Hospital, London; Honorary Member of the Pharmaceutical Societies of Great Britain, St. Petersburg, Austria, Denmark, America, etc.; Honorary Member of the College of Pharmacy of Philadelphia, New York, Ontario, etc.; Editor of "British Pharmacopeia," 1898. Sixteenth Edition. Philadelphia and New York: Lea Brothers & Co. 1899.

This book is so well known to the medical and pharmacal professions that a review of the work appears almost unnecessary, and therefore we shall only refer to its most salient characters. The volume is intended for the use of students of medicine and pharmacy, and covers in a way the whole field of medical chemistry, inorganic and organic, as well as qualitative and quantitative analysis, and includes the chemistry of both the British and United States pharmacopeias. Although we have always looked upon the book as the most useful work of its size in applied medical chemistry, still we would never think of recommending it to medical or pharmacal students beginning the study of general chemistry. The author's method of presenting the subject is considerably different from that which is followed, or should be followed, at the present day. He gives very little attention to the natural classification of the elements, and rarely refers to the relations of the elements of the different groups which, according to the opinion of the best teachers of chemistry, are two principles which should never be lost sight of in successfully teaching the subject. The chapters on organic chemistry would be much improved if more attention were given to the description of the groups of compounds taken as whole before describing the chemistry of their principal members. The sections on analyses are accurately written and are of sufficient length for a work of this kind. The book, taken as a whole, is a first-class manual of applied medical chemistry, and we believe that we can safely state that a pharmacist library would be incomplete without it.

The Canadian Practitioner and Review.

VOL. XXIV.

TORONTO, JUNE, 1899.

NO. 6.

Original Communications.

RECENT CONTRIBUTIONS TO THE THEORIES OF IMMUNITY.*

BY DR. WM. H. WELCH,

Professor of Pathology, Johns Hopkins University, Baltimore.

There has been no subject of so great interest to bacteriologists as this, and indeed none of greater interest to medicine in general. The theories have more than theoretical interest, because the deductions of so great practical importance have come almost entirely from the working out of theories. One's theories as to the nature of disease determine to a great extent one's method of practice, and even those who consider themselves eminently practical will find that they are very much influenced by theories. So no apology is necessary in calling your attention to this subject.

The understanding of immunity is an insusceptibility to infectious diseases, and that immunity may be natural, pertaining to the race or individuals of the race, or it may be acquired. It may be acquired in different ways, by having had a natural attack of the disease, or acquired by artificial methods. Physicians of the earliest time were familiar with the fact that certain diseases left behind an immunity that might be transitory or life-long in its duration. It was not until recent years, however, when it was found possible to produce immunity experimentally that we had any idea of the factors concerned in the production of immunity. We have had for over a hundred years a striking example of immunity, that is, the immunity against

* Read at meeting of Clinical Society of Maryland.

small-pox by vaccination. The fundamental nature of this was not understood until Pasteur's experiments in 1880. Since that time we have discovered the specific germs of a large number of diseases, and it has been found possible to produce immunity against nearly all of the pathogenic diseases by methods of vaccination. The immunity produced in that way, by the inoculation of an animal with virus, is known as active immunity, and it is brought about by the introduction of the germs of the disease, or their products. The discovery that it was possible to produce active immunity by the use of the chemical products of the germs is one of fundamental importance. It was really made in this country by Theobald Smith and some one associated with him in the study of hog cholera, and the most interesting forms of experimental immunity are those produced in this way. The induction of that sort of immunity is always attended by a certain amount of reaction, and it takes time for the immunity to be brought about. The reaction usually takes place partly at the seat of vaccination and partly constitutional, and it is questionable whether any substantial active immunity can be brought about without attending reaction. The reaction that attends the introduction of cow-pox is a good illustration. You have a local reaction and a certain amount of constitutional disturbance. It is also to be noted that it takes a certain amount of time, a matter of days, or perhaps weeks, before the substantial immunity is attained.

Now it was found by those first interested in the theoretical question that the cells and fluids, particularly the blood of animals that had been rendered actively immune, that these humors of the body had acquired new and extraordinary properties which they did not possess before. We are concerned more particularly with the presence in the blood of such animals of protective or healing substances, though they are not the only changes in the blood, for we have agglutinine, for instance, which has no healing or protective power whatever. As regards the healing and protective substances found in the blood of those actively immune, they can be transferred to another animal or individual, and can also produce immunity there, but the immunity brought about by transferring to another animal substances produced by vaccination in the first animal is very different from the natural immunity, and it is spoken of as passive immunity, the conception being that the protection through the immunity substance generated by the first animal is transferred, but the individual receiving this will not have any marked reaction, really no reaction at all, the immunity coming on at once, or after a very short period, and it is also of only transitory duration.

Passive immunity is brought about then by transferring to a healthy animal some of the immunity substances generated by vaccination in another animal, and it is attended by no reaction, the degree of immunity produced being directly in proportion to the dose of the serum, and lasting only for a short time, whereas the active immunity may last for several years at least.

Now it is found that the basis of active immunity is not the same in all animals, and it has become clearer and clearer that every micro-organism is a problem in itself. Bacteriologists have ceased to believe that there is any single law under which all the immunities can be brought. Each disease is a problem by itself, and it is extremely unsafe because one has found an explanation of the immunity of one organism to suppose that it applies to the immunity of another disease. There are two kinds of immunity substances, one that has the property of antagonizing the specific poison produced by the organism causing the disease, that is, an antitoxine, and a second kind of protective or healing serum, which has the property of destroying the micro-organism which is concerned in producing the disease, a bactericidal immunity. As examples of the first class are those antitoxines produced from diphtheria, tetanus and snake venom, while as examples of the second stand cholera and typhoid fever. Then in a number of experimental immunities we are at present insufficiently informed as to the basis of the immunity, whether it is antitoxic or bactericidal. The evidence seems to be that there are other explanations for these.

Now let us consider for a moment the nature of the antitoxic immunity. They can be produced only when you have in your hands in the first place a toxine, and a strong one at that; and not all bacteria produce strong toxins in our artificial cultures. The fact that a germ does not produce a strong toxine, however, in our experimental work, does not prove that it will not do so in the human body. If one could get a strong toxine from the cholera vibrio, or the typhoid bacillus, there is no question but what we could produce a high degree of antitoxic immunity, and it would be of high healing value. Metchnikoff is not satisfied with the view that cholera does not produce a strong toxine, although we have not been able to demonstrate it yet, and other workers are devoting their time to an effort to produce a strong toxine from the germ of tuberculosis. We must have then, first, a strong toxine, and that when introduced into a susceptible animal, first, of course, in a small dose, and then in gradually increasing doses, in the course of time produces a high degree of antitoxic immunity. That means that the blood and tissues of the animal have acquired the property of being an antidote to the poison, but that antitoxine has the property

of antagonizing only that particular poison. It is entirely specific. The diphtheria antitoxine is an antidote to the diphtheria toxine and to nothing else. Any unpleasant effects that result from the introduction of the antitoxine are due, not to the antitoxine, but to the vehicle that contains it, namely, the serum. It is impossible to isolate the antitoxine in pure state. It has never been obtained in a condition distinct from the reaction of proteid substances. Perhaps it is questionable whether the proteid acquired the antitoxine property just as iron acquires magnetism, but this is impossible to demonstrate. We are not then accurately informed as to the chemical nature of the antitoxine. A very important question arises as to the origin of the antitoxine. Buchner thought it was in some way derived from the toxine, and that it was a transformation, while another view supported by Behring is, that it is something produced in the body, presumably by the cells of the body, through a reaction set up by the action of the toxine. These two theories set over against each other without any conclusive evidence in support of either until about a year ago, when Erlich advanced an hypothesis, which can be put to the test of practical experimentation, and which, whether true or not, is an important contribution. The argument is something like this: the susceptibility to the toxine depends upon the presence in the body of cells that have an affinity for the toxine. The toxins are unlike most poisons with which we are familiar, and have a special affinity for the protoplasm of certain cells of the body. This has been demonstrated by the actual study of tetanus, where the nerve cells undergo a specific change. Susceptibility then to this toxine means that the individual has nerve cells, the protoplasm of which has a definite affinity for the tetanus toxine, and that animals which are not susceptible, the hen, for instance, have nerve cells, the protoplasm of which is of a different quality in that respect. Now he supposes, on the basis of studies that antedated altogether the bacteriological studies, that in the protoplasm there are different sets of molecules, sets of side-chains, if you please, and it is among these we are to search for the cells that have the definite affinity for the poison. He calls these groups of cells the toxiphoric group. Now the most remarkable point is that he has come to the conclusion, partly from reasoning, and partly from experiments, that antitoxine is nothing more than this normal constituent of the nerve cells that has the power of binding toxine, and that antitoxine, therefore, is something that exists normally in the cells, and is set free according to this principle. The toxine must first be introduced, and being introduced in a dose less than the fatal dose enters into combination with the protoplasm of the cells, and damages those special cells and no others. It

unites with the toxiphoric group of cells, causes a destruction of their function, so far as the action of the cells is concerned, for after the union the cells are defective, and in consequence of this the cell is stimulated by what is a general pathologic law to produce more of that substance, and according to an equally well-known law, it is over-stimulated, so that an excess of the substance is produced to overcome the loss. If, then, you keep introducing toxine you continue producing a combination until so much of the substance is produced that there is no room for it any longer in the cells; it is set free and accumulates in the blood; so an antitoxine is a substance normally present in the cells, which are stimulated to excessive growth, and it is consequently set free to circulate in the blood. This has aroused the greatest interest among bacteriologists, and is certainly one of the most important and ingenious explanations ever offered.

Now if this be true there should be means of demonstrating it. In other words, if the brain or spinal cord does contain tetanus antitoxine normally, we should find that it neutralizes the toxine outside of the body, because if you mix toxine and antitoxine in a test tube in proper proportions the combination is harmless. Now it has been found that if you make an emulsion of the brain or spinal cord in salt solution and add to that ten times the fatal dose of tetanus toxine, let them remain for a few minutes and then inject the mixture, the toxine will have been neutralized just as if you made the experiment of mixing toxine and antitoxine. This experiment was, of course, made at once, and it is thought to bring evidence that there is in the brain and spinal cord a substance which has the power of binding the tetanus toxine and making a harmless combination. The mixture of tetanus toxine with the emulsion of liver, kidney or other organs of the body has no similar effect, and therefore it is something apparently specific for the nerve cells.

That is Erlich's view then, and he thinks the same will hold true as to other antitoxines. It remains to be found out, for instance, in diphtheria, what cells or group of cells has this special affinity for the diphtheria toxine. It is only a theory and it is not proven definitely that the identity of this substance in the brain and cord is the same as the antitoxine. The experimenter in the Pasteur Institute, Metchnikoff, Reux and others have brought forth arguments opposed to this interpretation, one of the most curious being that if you mix finely powdered carmine with the toxine you get very much the same action as if you mixed the brain emulsion with it, and if that be true it is certainly very important. The theory is so suggestive and so important I thought it might interest you to have your attention called to it.

Now as regards the other kind of immunity, the bactericidal, that was discovered by Pfeifer in his experiments with the cholera vibrio. You can render immune a guinea-pig, which is highly susceptible to the poison of cholera by inoculating it with the living or dead cholera bacilli, using first small and then gradually increasing doses. There is here no antitoxic action. If you mix the serum of the animal with the living culture of the cholera bacillus no change takes place except that of agglutination. If you introduce the living cholera culture into the peritoneal cavity of the guinea-pig that has been so vaccinated a phenomenon takes place called generally the Pfeifer phenomenon and you can study the effects of that phenomenon by removing a drop or two from the peritoneal cavity of the guinea-pig at intervals of a few minutes, as the whole process is completed in twenty to thirty minutes and you will find that immediately after the introduction the cholera bacilli lose their motility, tend to clump together to some extent and quickly break up into granules, no longer recognizable as bacilli, and this is spoken of as a solution of the organisms. No antiseptic we are familiar with is so powerful as that, for within a few minutes they disappear.

Now if you introduce the cholera culture into the peritoneal cavity of the normal guinea-pig no such phenomenon occurs. The bacilli multiply rapidly, and the animal dies of experimental cholera. That is called the phenomenon of Pfeifer, or the Lyso-genic or bacteriolytic phenomenon and the substance producing it is called lysin, so we have lysins as we have antitoxines.

Pfeifer's conception of this is that the peculiar substance exists in a negative state in the blood, and that it is rendered active when there is a demand for it, and further that it can be rendered active by a combination of the negative serum with some fresh serum. If in a test tube you take the protective serum, heat it to 55 degrees to render it negative, add to that a little fresh serum and then the bacteria, the reaction will occur. Two substances are needed then, one the specific substance, and the other some substance in the fresh serum. Erlich applies his doctrine to this also, but it is rather more difficult to understand. The main points are these. He supposes that the lysin is produced in the cells of the body just as the antitoxine substances are produced, but that it has two kinds of affinity: it unites on the one hand with the specific organism that produces the disease, and on the other, with a ferment, or alexine, which is normally present in the blood. This double affinity then is brought in to explain the bactericidal form of immunity.

Those are two of the most important contributions to the

subject of immunity, and in conclusion I would like to say a few words as to the practical application of these points.

We have in the first place the prevention of small-pox by the vaccine virus, that is, an active immunity, of course. In all probability vaccinia is a modified form of the small-pox virus, and the immunity depends upon the introduction of the living organism and its reaction. The individual is left with an active immunity, and as General Sternberg has shown, the blood of that individual is able to render the poison inert.

Then we have in the treatment of rabies another instance of active immunity, having nothing whatever to do with serum therapy or passive immunity. Its prolonged period of incubation after the bite gives time to immunize. Sometimes the symptoms come on before the immunity is fully established, and then of course the treatment is a failure. In all probability it is possible to immunize from cholera, typhoid fever and plague. In the latter case it has been carried on upon a large scale in India, and there seems to be evidence that this active immunization from plague is quite effective, and the scientific men who have gone to India have, to a considerable extent, so far as I can learn, immunized themselves to the disease. Hoffkine is also using the killed cultures of cholera to prevent that disease. There is no danger, of course, of cholera being produced from the killed culture. I suppose there is not much reason to question that in that way human beings can be rendered more or less insusceptible to cholera, and if there had been any occasion, as there came near being during our late war, to vaccinate against typhoid fever, it might have been done.

Now as regards the application of passive immunity, which perhaps interests practitioners more than what I have been speaking of. Of these the only one thoroughly established and about which we are capable of judging from full information is the diphtheria antitoxine. The tetanus antitoxine is a strong serum, but we cannot recognize tetanus in the human being until a large amount of the poison has combined with the nerve cells and so much damage is done that the antitoxine which only neutralizes the toxine is not able to offer hopeful prospects. The method of treatment offers some chance, but on the whole the evidence is rather discouraging as to the antitoxine treatment of tetanus. The later statistics, however, as we secure stronger and stronger toxines, are growing better. The treatment of snake-bite by antivenine is based upon scientific principles, and is working well in India. In antityphoid serum, etc., we have little healing but marked preventive powers. It is rather extraordinary that the antistreptococcus serum should have gotten into such vogue, for the question is still an open one, and it has been found that there is no guarantee that it is

antidotal to any streptococcus except the particular one that has produced the antitoxine. There are streptococci and streptococci and they differ widely in their properties, so that the one you may have to deal with in a case of meningitis or of child-bed fever, etc., may not be identical with the one used to produce the serum, and if not, it is not neutralized. So the bacteriologists are in a state of great scepticism as to the value of that serum, and I think such serum should not be introduced into general practice until there is a good experimental basis to authorize it.

COCCIDIOSIS IN LIVER OF RABBIT.

BY DRs. H. B. ANDERSON AND PAGE.

Coccidia occur very frequently in the lower animals, especially the rabbit, and produce their effects in the liver, intestine and urinary organs. In man their occurrence has been noted in but few cases, and takes the form of a general and local infection. The coccidia invade the epithelial lining of the ducts, or mucous surfaces, and the skin, and from thence they may be enabled to enter the connective tissue by means of the lymph or blood-vessels, and so become generally disseminated.

The disease, as it appears in the liver of the rabbit, may be seen to occur in whitish nodules, varying much in both number and size. Their occurrence in large numbers is very frequent, and their dimensions may range from that of a pin's head to a hazel-nut. When these nodules are cut into, a semi-transparent, yellowish-white, almost caseous material escapes, which consists of debris and a great multitude of coccidia. The coccidium oviforme, as seen in the cysts, occurs in two forms: a round, granular, protoplasmic mass, varying in size, and an oval encapsuled body containing more or less granular material, which only partly fills up the space with the membrane. Those which may be presumed to be the less mature forms, are round, granular, possessing often a nuclear appearance within them. Of the younger forms most of them exhibit many peripheral, deeply staining granules, arranged apparently about the circumference of the coccidium. The more mature forms possess a capsule, and are clear oval bodies, showing a double contour under the microscope.

R. Pfeiffer maintains that these young protoplasmic, non-encapsuled coccidia may split up within the lumen of the bile-ducts into many "sickle-shaped" bodies, and so propagate themselves. With the encysted forms, however, before they multiply it would seem that they must pass from the body of their host, for their further development cannot be traced in

the liver. Some believe that the capsule must be digested off by the gastric juice and the psorosperms set free. At any rate, if placed in water at 37° C. or at the room-temperature, in the former instance in twenty-four hours, in the latter within a few weeks, the granular mass in the cells may be seen to undergo a change, resulting in its division into four sporocysts or sporoblasts. These sporocysts or psorosperms become enclosed within a thin, delicate membrane, and within their substance is developed a crescentic rod noded at one extremity.

The lesions due to these coccidia occur in the bile-ducts, and consist in the production of a cystic condition, while from the cyst walls may be seen the most beautiful papillomatous growths. The walls of the older ducts may become eventually transformed into an almost non-recognizable cicatricial tissue.

In the specimen presented the bile-ducts may be seen in some cases to be filled with coccidia, the walls presenting beginning papillomatous changes in the form of small projections of connective tissue into the lumen of the already dilated and cystic duct, the projections being knot-like in character and lined with a small amount of delicate epithelium. About the ducts is an increase of connective tissue, which, however, varies in amount at parts. The character of this tissue is such that directly under the epithelial lining many round cells may be seen, but further out it appears much older. At intervals accumulations of round cells in nests may be noticed, as if an irritant were acting at that point. The early stage seems to be an inflammatory condition, which precedes the dilatation and cystic condition. From the walls of the ducts there pass in the lumen many papillomatous growths, which may be seen to branch out in different directions. The connective tissue bearing these growths appears to rapidly assume the characters of fibrous growth. The coccidia within are of a round or oval shape, the latter predominating. Some of these protoplasmic masses were seen to be pear-shaped, the small end of the pear pointing towards the nucleus of the cell near the basement membrane, as if extruding itself from the cell.

What might be taken to be fusions of the papillomatous projections may be seen, for one may grow inwards from either wall, and, meeting in the centre, become intact. Instances were noticed where these growths had met, and the epithelium already destroyed on the extremity of the papilla, presumably by pressure. At other parts it may be seen where three of these projections have grown together and a small triangular area of the duct cut off. These papillæ, or parts of them, may at times become necrotic. Passive congestion is marked in places, and many vessels much engorged.

The demarkation of the connective tissue, surrounding the

bile-ducts, from the liver cells is fairly sharp, with no seeming tendency to produce an inter-cellular increase of connective tissue. In some cases proliferating bile-ducts may be seen in the connective tissue which surrounds a cystic duct.

As a local disease coccidia are met with in man in the genital and intestinal tract, in the liver, and in Davier's and Paget's disease.

Their most interesting relation, however, is the alleged connection with cancer. Concerning this Roncali says, in his paper: "The fortunate contingency that led me to the observation and study of an adeno-carcinoma of the ovarium, wherein blastomycetes could be seen in almost numberless quantities, and . . . the morphological analogy of *Saufelices*, blastomycetes and my own, with cellular inclusions, observed and called coccidia by earlier authors, in the elements of malignant neoplasma of man, are the principal factors that have encouraged me to continue my investigations." He remarks at another place, "that all authors had seen genuine parasites in epitheliomata and sarcomata, but all—with the exception of Russel, Banti and Messer—have been mistaken in assigning to these parasites a place in the animal kingdom." His conclusions are that "as regards the etiology of malignant tumors, both adeno-carcinomata of the ovarian gland, and many sarcomata, as well as the epitheliomata of extremely rapid growth and essentially malignant, are undoubtedly of parasitic origin and are due exclusively to blastomycetic infection." From the adenomatous condition presented in this liver to a malignant form of growth does not seem to be a very great step, but Roswell Park thinks that too much consideration has been given to this.

Clinical Notes.

A CASE OF PYLEPHLEBITIS: LAPAROTOMY, RECOVERY.

DRS. W. H. B. AIKINS AND H. A. BRUCE.

The patient, E. D., aged 24, male, came into the Toronto General Hospital on the 12th of September, 1898. He had severe chills for some days, and, on admission, complained of cramps in his stomach and pain in the region of the liver. Nothing of importance noted in his family history. He has suffered greatly from constipation. Uses alcohol moderately; has never had gonorrhea. At ten years of age he had diphtheria, and has not been confined to his bed since. There is nothing present to indicate that the patient has ever had syphilis.

Present illness.—During the past summer the patient worked in a basement where he constantly inhaled foul odors, emanating from a filthy well. He has not felt well for three months, but did not stop work until two weeks ago. During this time he has had severe headaches, pain in the stomach, severe chills, followed by fever and perspiration, insomnia, vomiting.

Condition on admission.—Anemic, but apparently well nourished. The conjunctiva slightly icteric; tongue thickly coated in the centre, clean at the edges.

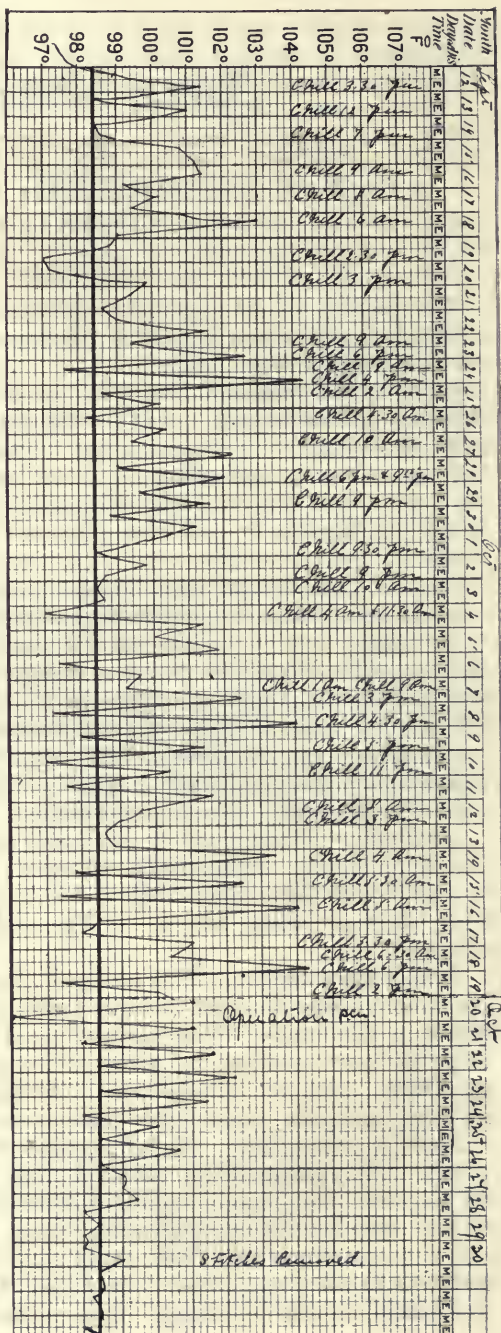
Abdomen.—Prominence on the right side, in hepatic region. The liver is very considerably enlarged; the lower margin can be felt two or three inches below the ribs; the upper limit of liver dulness being normal. The spleen is very slightly enlarged.

Respiratory system.—Has a slight cough and expectoration. No tubercle bacilli found in the sputum. Nothing abnormal found in the lungs. Nothing abnormal found in the circulation, nervous, osseous, or genito-urinary systems. Urine sp. gr. 1020; acid, no albumen, no bile salts, no bile pigments, no puss, no sugar, some triple phosphates.

Blood examination.—Widal reaction tried with a negative result. The plasmodium malarie not found. Hemoglobin, 54 per cent.; red blood corpuscles, 3,600,000; white, 12,000. It will be seen by the accompanying chart, that the patient has one and sometimes two chills daily, and that there is no regularity as to the time of their occurrence. The difference between the maximum and minimum temperature on October 9th was

seven degrees. On October 13th some blood was taken for bacteriological examination. An organism was found which grew very slowly on the media, which turned out to be the streptococcus pyogenes.

As his condition did not improve under medical treatment, on October 17th consultation was held and an exploratory incision decided upon. On October 20th (the operation was performed by Dr. Bruce, assisted by Dr. Adam Wright) an incision was made parallel with the lower costal margin on the right side, and two inches below it. On account of the great size of the liver, it was impossible to properly explore the interior of the abdomen until another incision was made joining the former one at right angles, about its middle. The liver was found to be greatly enlarged and congested. Patches of lymph were present on the upper surface. An aspirating needle was introduced into the liver in several places, but nothing came away except a little blood. No pus was



found anywhere. The gall-bladder and bile-ducts were examined, and appeared to be quite normal. The cæcum and appendix vermiformis were examined and were in a healthy condition.

The stomach was carefully gone over, and nothing abnormal found. The kidneys, spleen and pancreas were palpated, and showed no evidence of disease. The abdominal wound was closed. A chill occurred as soon as the patient was taken back to the ward, but there has been no return of chills. The wound healed by first intention, and the patient made an uninterrupted recovery. He left the hospital five weeks after the operation, apparently quite well.

The liver, however, has only slightly diminished in size. The patient is now working in a factory doing very laborious work, and feeling in the best of health. The liver is still enlarged, but its lower margin is only one inch below the border of the ribs.

One cannot feel absolutely sure of the diagnosis, but the condition seems more like pylephlebitis than anything else. Mr. Frederick Treves reports a case of pylephlebitis, in which he did an exploratory operation, the patient ultimately recovering. In his case he could see small, yellow points of suppuration all over the liver.

(Reported by Dr. Stewart, of the Resident Staff, Toronto General Hospital.)

CASES IN PRACTICE.

BY J. W. MCINTOSH, B.A., M.B., MANITOWANING, ONT.

Pernicious Anæmia.

Female, aged 31. Family history : Four sisters, all said to be more or less anemic (simple). Personal history : Married nine years. First child died at fourteen months, then six successive miscarriages. For some years appeared anemic, but apparently quite well, except history of an attack apparently somewhat similar some three years previously. About 1st January last, threatened miscarriage at eight months ; with rest and sedatives continued to full term. Positively no specific history in self or husband. 30th January healthy child born ; labor normal—lasted twelve hours—not severe. No post-partem hemorrhage, no rise of temperature. Secundines normal in appearance but rather scanty. Patient got up tenth day, but weak and anemic in appearance. Put on tonics and hematincs—strychnine, peptonate of iron and manganese, cod liver oil emulsion with hypophosphites of lime and soda ; but instead of strength increasing and anemia improving, got progressively worse, requir-

ing to rest several times whilst dressing owing to faintness and breathlessness. Small ulcers appeared on the tongue and buccal mucous membrane. Baby weaned. Rest, nourishment, tonics, hematinics, hygienic surroundings of no avail. Steady increase of anemia, weakness and breathlessness on exertion. 19th February—suspected pernicious anemia. Microscopical examination of blood confirmed diagnosis. The condition at this time was as follows:

Symptoms and signs: Countenance pale and of characteristic lemon tint. Skin dry and bloodless, no edema, sclerotics pearly. Tissues not emaciated but muscles soft and flabby to the last. Lips and gums bloodless. Tongue clean but flabby and anemic. Small ulcers on tongue and buccal mucous membrane, not healing with chlorate of potash or silver nitrate. Appetite none. Gastro-intestinal dyspepsia, later on with slight nausea, then vomiting, which became uncontrollable until the stomach was given absolutely no food. Vomit composed of large quantities of bile green in color (showing lodgment in stomach long enough for oxidation by gastric secretion) and giving reaction for biliverdin. Liver enlarged, with slight tenderness over that region. Spleen and other abdominal organs apparently normal. Bowels constipated, but acted much more freely after purgative than was their wont during health. Respiratory organs normal, except for intercurrent bronchitis.

Cardio-vascular system: Cardiac dilatation, hemic murmurs in mitral, pulmonary and aortic areas. Arteries in the neck pulsate visibly, pulse soft and compressible, but rather full. Superficial veins somewhat prominent. Slight hemorrhages from nasal mucous membrane. Patient languid, with marked faintness and breathlessness on exertion. Urine, sp. gr. 1010–1015, light in color, but no urobilin reaction elicited. Fever, temperature ranged from 99° F. to 102.4° F.

Nervous system: Numbness in arms, chest and legs, tingling and pruritis general. The blood—microscopical examination showed red corpuscles enormously diminished, individual cells abnormally rich in hemoglobin and showing megalocytes and microcytes. Poikilocytosis marked—one form nucleated; numerous leucocytes diminished in numbers. Platelets, none showed. Numerous nucleated red corpuscles, giantoblasts forming the great majority. After the course in arsenic there was an increase in the number of red corpuscles from $\frac{1}{2}$ million per c. cm. to $\frac{3}{4}$ million.

Treatment adopted: Tonics, hematinics, rest in bed, and hygienic attention to person and surroundings failed to bring about improvement; otherwise symptomatic. Disease rapidly progressive. Turned to Fowler's solution, initial dose 3 minims,

increased to 9 minims three times a day—temporary improvement. Gastric and bronchial symptoms intervened and patient relapsed; stopped Fowler's solution, controlled the above: Gave arsenious acid in triturates. No puffiness of face produced, but vomiting commenced and became almost uncontrollable; stopped arsenic. Transfusion considered, but rejected owing to apparent hepatic hemolysis. Patient died on 27th March, eight weeks after onset. *Post-mortem* examination could not be secured.

Points of Interest.—Failure of iron, temporary improvement under arsenic. Gastric disturbances requiring cessation of arsenic and exclusive use of nutrient enemata for nourishment. Predigested proteids were found most suitable both per os and per rectum. Hunter's idea *re* farinaceous food did not agree in this case. The temporary hemogenesis under arsenic and marked evidences of hepatic hemolysis from the congestion and enlargement of that organ and from the large quantities of biliverdin in the very copious vomited matter and the dark bile-stained feces. The rapid course—less than two months. The intercurrent bronchitis. The history of a probable previous attack. The persistent rise of temperature above normal, which was most of the time between 100° F. and 101° F.

Acute Infective Endocarditis with Embolism in Cardiadextra Congenitalis.

On the evening of 11th February last, I was called in consultation with attending physician to see A. B., male, aged 18, at Providence Bay, thirty miles distant—supposed to be suffering from la grippe, malposition of heart not having been recognized. Family history good, parents and nine brothers all being in good health. Personal history: Previous health good till a few months ago, since which time his strength did not warrant hard work, but otherwise well. Cardiac dilatation may have commenced then. History of onset imperfect, but I learned that about ten days previously, he took ill with pain in the chest, chills, fever, accelerated pulse, occasional palpitation of the heart, progressive weakness and delirium. Coma ensued some twenty-four hours previous to my visit.

Condition on examination: Light coma. Tongue coated. Examination of abdominal organs revealed nothing abnormal in position or condition. Constipation. Urine febrile. Lungs apparently all right. Pulse 118, weak. Temperature 102.8° F. per rectum.

Cardiadextra: Apex beat felt in right fifth intercostal space, about an inch from the sternum. Heart enlarged, area of absolute cardiac dulness circular and about $1\frac{3}{4}$ inches in diameter. Distinct systolic bruit heard at the apex.

Diagnosis: Congenital cardiadextra. Acute attack of infective endocarditis, with cardiac dilatation and embolism in central nervous system producing coma.

Patient died a few days later. Unfortunately, owing to the distance, I was unable to secure *post-mortem* examination.

Persistent Thyro-Glossal Duct (?)

On October 12th, 1898, whilst on a professional visit to Kilmarney, twenty-five miles distant, I was called in to see a female, aged 21, with enlarged thyroid gland. For some months she had complained of an offensive discharge coming into her throat, without vomiting, without coughing, and with no accompanying catarrh, becoming quite profuse at times, on which occasions she noticed a diminution in the size of the goitre. There was no history of an abscess with sudden rupture into the trachea. Firm compression on the gland produced such discharge in the throat with apparent diminution in the size of the isthmus, or middle lobe of the thyroid. Patient said it had resisted medical treatment for some months. I asked her to come to my surgery here for further examination and treatment, but in the meantime placed her on inunctions of lanolin and iodoform. About two weeks later, word came that this had completely cured the offensive discharge; but as to the size of the goitre I did not hear. A future laryngeal examination might reveal a secretion into the foramen cecum, which would be of interest, as the late Professor Kanthack (*Journal of Anatomy and Physiology*, vol. xxv., p. 155) found no trace of such a duct in one hundred adults examined.

The Canada Lancet announces in its May issue, that Dr. H. B. Anderson will become its editor when he returns from Europe next autumn.

A number of surgeons of Toronto and vicinity left their homes, May 28th and 29th, to attend the annual meeting of the American Railway Surgeons at Richmond, Virginia. Among them were Dr. Bruce L. Riordan, who was elected President at the meeting held last year in Toronto, Drs. Herbert Bruce, J. Noble, W. H. Pepler, and Thos. Mackenzie.

Dr. J. Price-Brown will attend the meeting of the American Laryngological, Rhinological and Otological Society in Cincinnati on the 2nd and 3rd of June.

Society Reports.

TORONTO PATHOLOGICAL SOCIETY.

The regular monthly meeting of the Toronto Pathological Society was held on April 29th, Dr. Primrose in the chair. Present: H. B. Anderson, Bruce, Greig, Silverthorn, Hamilton, Wm. Oldright, H. H. Oldright, Rudolf, Peters, Amyot, Carveth, E. E. King, R. A. Reeve, I. H. Cameron, C. J. O. Hastings, J. J. Mackenzie. As visitors there were present Drs. J. O. Malloch, King Smith, C. A. Page, Wm. Goldie and Messrs. P. L. Scott and Coutts.

Case of Carcinosis.

Dr. Amyot: Male, aged 66. Had small-pox and malaria forty years ago. Five months before death was struck on the lower jaw with a piece of wood. Shortly afterwards a small tumor was noticed at seat of injury. This increased in size until it extended up the ramus of the jaw, to the steno-mastoid muscle and the tissues in the neighborhood, forming quite a large mass. This softened, pointed, discharged and diminished much in size, so that at time of death there was only a slight enlargement. Heart beats became very irregular, both as to rhythm and force.

Post-mortem.—Emaciation. No pigmentation. Over chest, abdomen and back about thirty to forty nodules from the size of a split pea to that of an ordinary white bean were to be seen to the square foot, some movable under the skin, others quite attached to the skin. The number of these nodules gradually diminished on the thighs to the knees (there were only two below, and these just immediately below). The same on the arms to the elbows, below which there was but one and that just below the joint. The same kind of nodules were to be found on the head, neck, face and scalp—edema of the glottis. Pleural cavities of both sides obliterated. Nodules scattered throughout its substance. Remarkably few nodules in either lung. Counted on the surface of the heart sixty-seven growths. There are some projecting into the interior of the heart as well. A continuous row of nodules along the thoracic duct. In the abdomen the peritoneum is literally sown with them, even over the intestinal surface. The liver has them thickly scattered throughout its substance. Spleen and kidneys free, supra-

renals both much infiltrated. Microscopically it is an adenocarcinoma, with extremely small alveoli, and small, irregular cells. It would be difficult to make out a parenti for this growth with any normal gland.

The remarkable points with reference to this case are: 1. The surface distribution of the nodules, not below the knees, not below the elbows. If it was a dissemination by the blood stream, it would most likely have extended even to the feet and hands. 2. Then, again, the pleura invaded, with only a nodule here and there in the lung, as though it had again been invaded by the lymphatics (though of course, carcinoma does go up stream, too, in the lymphatics). 3. Then the remarkable condition in the heart. One fairly frequently finds a nodule or two in the heart. Here there are sixty-seven on the outer surface alone; almost no invasion of the lung, and still this extreme invasion of the heart. I think we do not often think of the heart having such a free supply of lymphatics. 4. Again, the spleen and kidneys all free of nodules; the supra-renals, the intestines, the peritoneum and the liver full. Here is an example of up-stream invasion and evidence that the dissemination was not by the blood vessels.

Dr. Amyot's paper was extremely interesting, as were the specimens. He was of the opinion that the lymphatics and not the blood vessels were the channel of dissemination. Discussion was shared in by Drs. Wm. Oldright, Rudolf and Fotheringham.

Carcinoma of Leg.

Dr. Amyot: Female, aged 60; commenced seven years ago as a thick scaly patch, then ulcerated after a couple of years. This gradually grew larger, until, as you see, the specimen now is $2\frac{1}{2} \times 4$ inches long axis with the leg. Fetid discharge. Growth overhangs normal tissue, does not invade it, but seems to be present (the cancer) in the connective tissue of ulcer. In early stages the ulcer looked like an ordinary ulcer. It is a squamous-celled epithelioma.

Carcinoma of Esophagus.

Dr. Peters presented a case on the above from a man aged about sixty-seven. The history extended over a period of about six months. The principal symptom was the production of a violent spasmodic cough on any attempt to swallow fluids. A laryngoscopic examination by Dr. J. D. Thorburn excluded tubercular, syphilitic and simple inflammatory disease of the larynx, and there were no symptoms of aneurysm. Solid food could be swallowed more easily than liquids, and an esophageal bougie could be with ease passed into the stomach. During

the passage of the bougie the patient complained of pain about opposite the manubrium of the sternum, the region afterwards found to be the seat of the cancer. The patient died after two days' acute illness from septic pneumonia. On *post-mortem* examination a squamous-celled epithelioma of the esophagus was found opposite the bifurcation of the trachea. A perforation admitting a No. 6 catheter had taken place into the trachea, through which the food passed in the act of swallowing, thus producing the spasmodic cough and ultimately leading to septic pneumonia.

Microscopic examination revealed squamous-celled epithelioma with typical cell nests, shaggy ulcerating growth in middle of esophagus opposite the bifurcation of the trachea, which it here perforated, allowing food material to pass in. This has been distributed over both lungs, setting up pneumonia. It is patchy in character. Pleura have both lost their gloss. There is a post-pleural abscess $1\frac{1}{2}$ by $3\frac{1}{2}$ inches, extending up the spine to the neck. There is very little enlargement of the neighboring lymphatic glands. Microscopically it is a good example of a squamous-celled epithelioma. The pneumonia shows a red and a grey stage, and remarkably the neighboring lymph glands show no carcinoma.

A Series of Appendices.

A series of appendices was presented by Dr. Peters, followed by others from Drs. E. E. King and H. A. Bruce.

Dr. Peters presented a series of four appendices removed by operation.

CASE 1.—The first was from a recurrent case of some ten years' standing. It gave rise to attacks of appendicular colic of disabling severity. Some of the attacks were associated with inflammatory symptoms and localized tenderness. Some thickening could be felt through the abdominal wall, which was very thin. On section the appendix was found to be bound in by extremely dense cicatricial adhesions, and occupied a position upwards and inwards towards the umbilicus but behind the lower end of the ileum. On dissecting it out of this bed a foreign body (fecal concretion) about $\frac{3}{4}$ inch in length was found. The whole length of the organ was about $2\frac{1}{2}$ inches.

CASE 2.—This organ also contained a fecal concretion about $\frac{3}{8}$ inch long, situated about $\frac{1}{2}$ inch from the cecal opening. About $\frac{1}{2}$ inch to the distal side of this concretion was a gangrenous patch, in the centre of which was a small perforation. This had given rise to a diffused purulent peritonitis. Although it is a rule in treatment not to attempt removal of the appendix when it is surrounded by an abscess

cavity, this rule may be disregarded with advantage to the patient when a foreign body is found in its cavity. Otherwise, although the perforation may heal by granulation, the foreign body which is left is very likely to set up subsequent attacks any one of which may terminate fatally.

CASE 3.—This presents a very small perforation in the centre of an ulcerated area about $\frac{3}{8}$ inch in length on the lateral aspect of the organ. The remainder of the mucous membrane was quite healthy and no foreign body was present. There was no evidence of disease of the neighboring cecum or ileum, and no history of tuberculosis or typhoid fever could be obtained.

CASE 4 was a case of catarrhal appendicitis with great general thickening of the whole organ, and a small perforation had occurred about half-way between the base of the appendix and its tip. There was very great thickening of the mesentery, with fatty infiltration.

Dr. E. E. King, in presenting his specimen of appendix gave the following details of the case:

The case was operated on during the attack. The patient had thirteen or fourteen previous attacks. He had refused previous operation but consented reluctantly. The intestines were matted into a large mass involving the appendix. The mass of intestine had to be dissected, and about half drachm of pus was evacuated. It was with great difficulty that the appendix was removed and the first ligature cut through, and no other precaution than simple ligation was applied. The recovery was uninterrupted and the temperature did not rise above 99.2.

Dr. Bruce, in presenting his specimen of appendix, remarked upon the following special features of the case: The patient, a boy of fourteen, had never had an attack before, and this lasted just seventy-two hours. There was only about half an ounce of pus; a small elongated fecal concretion was found. The appendix was about one inch in length and perforated about three-quarters of an inch from its tip. A mass of omentum completely surrounded the appendix. The general peritoneal cavity was shut off by adhesions between omentum and parietal peritoneum.

This series was discussed by Dr. Wm. Oldright, who expected to have presented two appendices removed during this month and which would have been a contrast to those shown to-night, the pathological condition being in inverse proportion to the clinical symptoms. In both these cases the attacks had been frequent and severe, and yet nothing but constrictions in the lumen were found, the operation in each case being between attacks. Dr. Oldright wished to know whether the fecal concretions observed by others were found caminated. He thought

the formation was generally by repeated coatings of fecal matter upon a small nucleus. This was so in those they had met with. He also wished to hear the observations of others as to the proportion of cases where appendicitis had only occurred once in the same patient without recurrence, even when sufficient time had elapsed for recurrence, this being a point of great importance in practice.

Drs. Rudolf and Anderson discussed specially the action of the omentum in assisting the walling-off process in appendiceal abscess. Dr. Anderson referred also to two cases he had seen this year of left-sided femoral phlebitis following successful and aseptic operation for removal of appendix.

Dr. Peters, in replying, said that in his opinion the position of the omentum in appendicitis was determined by the position of the appendix. If the latter be placed downwards or backwards from its usual site, the omentum can hardly reach it.

Epiphysis of Co Calcis Separated by Osteomyelitis.

By Dr. Peters.

Dr. Primrose, discussing Dr. Peters' paper on epiphysis by osteomyelitis, pointed out the great readiness with which the periosteum of the shaft of the bone in a child can be stripped off, even by an injection beneath it, up to the epiphyseal cartilage, from which point to the joint the periosteum clings to the epiphysis so firmly as to tear it away with it if sufficient force be applied.

Cœur Biloculaire.

By Dr. Rudolf.

Dr. Cameron, discussing Dr. Rudolf's paper on cœur biloculaire, elicited the fact that recent investigations, particularly by His, Kokitansky, and Peacock, upon the development of the human heart, have quite upset the teachings derived from the study of the heart of the chick, and placed the embryology of the heart upon a different basis.

Coccidiosis in Liver of Rabbit.

By Drs. Anderson and Page. (See page 318.)

It was moved by Dr. Fotheringham, seconded by Dr. Oldright, that the rest of the programme be taken as read, that nominations might be received for officers for the coming year.

The President then declared the meeting adjourned.

TORONTO CLINICAL SOCIETY.

The fifty-fourth regular meeting of the above society was held in St. George's Hall, Elm Street, on Wednesday evening, May 10th, at 8.30 p.m. The President, Dr. F. LeM. Grasett, occupied the chair. Fellows present: Drs. J. A. Temple, E. E. King, Ryerson, H. J. Hamilton, McIlwraith, Bruce, Boyd, Primrose, Small, William Oldright, Lehman, Peters, Badgerow, Thistle, Britton, Macdonald, Bingham, Fenton, Greig, Pepler and George Elliott.

In connection with the adjourned discussion on severe injuries and crushes involving the question of amputation, Dr. E. E. King showed two cases of injury of the foot and hand respectively, both street-car accidents, in both of which nature had effected the cure. Dr. William Oldright also showed a case of injury involving the question of conservative surgery, and described the conditions present.

Dr. Primrose introduced a patient, a woman, whom he had seen for the first time on Christmas morning, 1898. She had fallen on her outstretched hand on a piece of crockeryware. The flexors sublimus and profundus of both index and little fingers were completely severed. The superficial palmar arch was torn with much bleeding, and the cut was carried down to the metacarpal bones. The tendons were sutured with difficulty owing to the retraction, kangaroo tendon being employed. A drain was put in the outer angle of the wound, and it healed without suppuration, although there was a good deal of dirt in the wound at the time of the injury. The nerve passing to the index finger was sutured, but he could not secure the other nerves. The patient has sensation in that finger.

Drs. Peters, E. E. King and Oldright continued the discussion of the several cases presented.

Un-United Fracture.

The subject of this case was a young lad of fourteen years. He was seen first by Dr. Temple on October 31st, 1898, for an alleged dislocation of the right shoulder, which had occurred five weeks previous to the time he was first seen by Dr. Temple. The injury was received in a football game. He was thrown violently to the ground, and received an injury of the upper part of the right shoulder. He was seen shortly afterwards by a physician, and the diagnosis then was dislocation of the right shoulder. The arm was then put up in splits with the arm close to the body, and strapped across it. The boy was kept in that attitude for four or five weeks, during which time he suffered from a great deal of pain. When Dr. Temple saw him

the arm was still in a sling, and when taken down it hung alongside his body. He could not raise it from the side of his body, but he could take hold of it with the other hand and lift it up. On examining the arm Dr. Temple felt quite satisfied it was not a fracture dislocation but an un-united fracture. The boy was fairly stout, but you could feel very distinctly that the lower part was very near the surface. The jagged end of the bone almost protruded through the skin. He thought he could make out that the head of the bone was in its proper position. The lower fragment laid outside the upper one. He felt quite satisfied a fracture existed, and that it was not a case of dislocation. Dr. King has made skiagraphs of the case, which show clearly the nature of the accident. (Two skiagraphs here exhibited.) In the first one, looking at the arm from behind, you can see the outline of the scapula beautifully, the lower fragment lying outside the upper. In the other, the front view was very satisfactory. Drs. Cameron and Grasett saw the case in consultation. The treatment proposed was to try under chloroform to reduce the fracture, but it was absolutely impossible to dislodge the fracture. It could not be brought down although two surgeons pulled at either end. Dr. Grasett made an incision, but he could not dislodge the fracture even then. After breaking down the fibrous union it could not be done. We then removed a piece from the lower fragment and brought the ends into very fair apposition. The bones were not wired. We put the arm up in an extended condition, out from the body with a rectangular splint, along the outer side and up over the shoulder, and another one on the inside making extension. He was kept in that position for a week or two, and then Dr. King made a second skiagraph, about ten days after the operation. This shows the arm, looking at it from the anterior surface, and you will see the bones are in position. We got the bones as normal in shape as we possibly could, but not completely plump together. For a period of six weeks, the part was not disturbed; then the splints were taken off, and the injured boy has the most complete use of his whole arm. He can play hockey, baseball, etc., and has complete movements. The result has been most gratifying without wiring. Dr. Temple asked for an expression of opinion from the Fellows regarding the treatment of these cases.

Dr. Grasett—When we made that incision and tried our very best, even using levers to throw the lower fragment in, we could not do it. We then took off half an inch of the lower fragment and then it came together comparatively readily. He further stated that Dr. Cameron thought there was no occasion to wire. He had treated these cases, sometimes wiring and sometimes not.

Dr. Peters discussed the case at some length. He did not think the case one of un-united fracture, and could not see why it should be called such. Any other treatment than opening up the parts would not have resulted so well.

Drs. Primrose, Oldright, E. E. King and Britton continued the discussion for some length of time, instancing similar cases seen in their own practices.

Dr. A. A. Macdonald spoke in reference to the use of screws in cases where the fracture was oblique.

Dr. A. A. Macdonald showed an appendix removed from a scrofulous lad, who had been the subject of two or three previous attacks of appendicitis with a good deal of pain in the region of the appendix.

2. A specimen of cystic ovary somewhat bound down, occurring in a woman who was insane. The irritation of the ovary, he thought, had something to do with the mental condition.

3. A specimen of fibroid tumor of the uterus, growing sub-peritoneally from the upper part of the fundus. This he enucleated, tying off the vessels.

4. A specimen of a sub-mucous fibroid from the interior of the uterus. The woman from whom Dr. Temple and he himself had removed this, was suffering from an ovarian cyst. The peculiar condition was not recognized before, owing to the hardness in the vicinity. It was not recognized until the patient was on the table.

Election of Executive Committee.—The following Fellows were elected the Executive Committee for 1899-1900: H. B. Anderson, H. A. Bruce, G. Silverthorn, George W. Badgerow, George A. Peters.

GEORGE ELLIOTT,
Recording Secretary.

Editorials.

CLINICAL VS. DIDACTIC TEACHING.

The methods of teaching in our medical colleges have been much improved in recent years. It is generally recognized that modern methods are more satisfactory than those that formerly prevailed. There is probably one exception to this general statement. We have nothing now similar to the old apprenticeship system, and that is, in some respects, unfortunate.

One of the questions which repeatedly comes up is now being discussed in the medical journals of the United States, *i.e.*, the question as to the relative merits of didactic and clinical teaching. From an article in *Medicine* (Dr. Moyer's medical journal) we learn that the editor of the *Philadelphia Medical Journal* has expressed the view that didactic teaching is quite useless, while Hirst and Hare on the other hand hold a contrary opinion.

In Canada the leading teachers of medicine are generally agreed that in former times we had too much didactic and too little clinical teaching, but we don't know that many, if any, will go so far as to say that didactic teaching should be abolished. A great deal depends on the character of the teachers. As a matter of fact some of the most learned physicians are poor teachers. A didactic lecture from one of the latter is generally absolutely useless for the average student, while a clinical lecture is often but little better.

Often, as pointed out by many, the so-called clinical lecture is little other than a didactic with a patient to look at. The best sort of teaching is probably that which is known as bedside teaching to small classes, and yet a didactic lecture may be delivered even at the bedside.

In the article referred to we find the following sentences (which we fully endorse) as to the qualities of successful teachers: "The true teacher is born, not made; he must possess that indefinable quality which enables him successfully to impart knowledge to others. If he have this, and with it enthusiasm, learning and knowledge, then he will instinctively choose the most appropriate means of imparting knowledge to his pupils."

TYPHOID FEVER IN LONDON HOSPITALS.

A representative of the *British Medical Journal* has been making certain inquiries respecting the regulations under which patients with typhoid fever are received into the general hospitals of London, and has received replies from the staff of seven of these. From the information it seems likely that every general hospital in that city admits typhoid patients into its public wards, but the proportion of such cases is generally either directly or indirectly limited for two reasons, viz., (1) The risk of infecting other patients, and (2) the increased strain on the nursing staff. It is generally considered that the stringent precautions adopted in the various institutions are sufficient to prevent any danger from infection. It is also generally believed that typhoid fever requires, as a rule, more time and attention on the part of the nurses than any other disease.

The proportionate numbers of cases which may be admitted to the various hospitals are approximately as follows: King's College, St. Bartholomew's and St. Thomas's Hospitals, 1 to 6; Guy's Hospital, 1 to 10; London Hospital, 2 to 9; Charing Cross Hospital, 6 to 22; University College Hospital, 3 to 16. With regard to the amount of cubic space allowed to each patient, St. Bartholomew's and King's College did not answer definitely, but simply stated that the typhoid patients were allowed the same space as those suffering from other diseases. At other hospitals the figures were for each patient: Charing Cross, 1,000 feet; University, 1,140; London, 1,348; Guy's and St. Thomas's, 1,800 each. The cubic space in certain hospitals thus appears to be remarkably small, but the *Journal* states that most if not all the authorities in the hospitals quite appreciate that fact.

THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

The new School of Tropical Medicine established in the Royal Southern Hospital, of Liverpool, England, was inaugurated by Lord Lister, April 22nd, 1899. A ward containing twelve beds has been set apart for the reception of patients suffering from tropical diseases, and two adjacent rooms have been fitted as

ward laboratories, with the most recent appliances. At the opening ceremony, the chairman pointed out (*British Medical Journal*) that, since the hospital had been opened, fifty-seven years ago, the wards had never been free from cases of tropical diseases. Its proximity to the docks was probably the chief reason why patients were carried there. The ward was at present full, and the twelve patients represented the nationalities of China, India, the United States, Norway, Sweden, Russia, Finland, England, and Ireland; and the diseases were contracted in Java, India, Brazil, Savannah, South Carolina, Benin, and Cape Coast Castle.

Lord Lister formally declared the ward and laboratories open, and said that Liverpool in this matter was doing what was of the greatest importance for the welfare of mankind. He also thought that the hospital and the school committee were to be congratulated on having obtained the services of so distinguished a man in these tropical diseases as Major Ross, whose observations had been of the highest importance. Every week or two they saw evidence and confirmation of the accuracy of his work, the recognition of which came from Germany, and from France, and in fact from everywhere. It was most fortunate that they were able to obtain a man of such distinction, of such competence as an observer, and one having had so much experience in tropical diseases, to be the medical officer; and also to be able to associate the school with the great college, of the pathological department of which Professor Boyce was the head. It was a double security that everything would be done to the best advantage.

ONTARIO MEDICAL LIBRARY ASSOCIATION.

In order to enable this Association to keep up with the times an "Endowment Fund" was established some months ago for the prompt purchase of the new publications as issued. As the interest alone can be used, and as the fund is only in its infancy, very little money is as yet available. It is hoped, therefore, that a generous response will be made to this fund by many of the profession who will not miss a small contribution in so good a cause.

Many may not feel justified, for one reason or another, in giving to this fund; but we are all able to help the Library in another way, and that is by sending all the old journals about the office. These can be utilized in "exchange" with other libraries. All that is necessary is to pack them in a box, address it to the Medical Library, corner Bay and Richmond Streets; freight will be paid on arrival, and an acknowledgment made through this journal.

Books of any date will also be gladly received. They are of some use to the Library; the great majority of old issues are of no use whatever to the regular practitioner except to remind him that he is "getting on in life." Therefore look over the old book-cases, cupboards, store-rooms and out-of-the-way corners, and send on all you do not need.

A cordial invitation is extended to the members of the Ontario Medical Association to visit and make use of the Library in any and every way during the meeting this month.

We have before referred to the generosity of our friend William Osler in offering to present a certain number of volumes each year, for a term of years, in memory of his old teacher, the collection to be called the "Bovell Library." The first instalment was received by the curator about three months ago, and contains many of the latest works on pure medicine.

THE ONTARIO MEDICAL ASSOCIATION.

The nineteenth annual meeting of the Ontario Medical Association will be held June 13th and 14th in Toronto, in the building of the Education Department, St. James' Square, through the kind permission of the Hon. Dr. Ross, Minister of Education. A banquet will be held in the evening of June 13th, at McConkey's restaurant, King Street. The Committee on Arrangements would feel greatly obliged if the members who intend to be present would inform their secretary, Dr. E. H. Stafford, Asylum for Insane, Toronto, as early as possible; tickets, \$2.00 each. Arrangements have been made with the railroads for special rates. Those who wish to take advantage of the reduced rates may do so by buying from the agents at points of departure a single ticket to Toronto, and in addition

obtaining a standard certificate which will be signed by the secretary at the meeting. This certificate thus signed will entitle the holder to his return trip at the reduced rate. No rebate will be granted on a return ticket already purchased.

The following is a synopsis of the provisional programme :

SYNOPSIS OF PROGRAMME.

JUNE 13th.—*Morning Session*—(1) Reports, etc. ; (2) "A Case of Muscular Dystrophy," by Dr. Ingersoll Olmsted, Hamilton ; (3) "Relapse in Typhoid Fever," by Dr. Wilson, Philadelphia ; discussion by Dr. Alexander McPhedran, Dr. J. L. Davison and others.

Afternoon Session—(1) Presidential Address ; (2) "Symposium on Sanitarium Treatment of Tuberculosis," by Dr. Vincent Y. Bowditch, Sharon Sanitarium, Boston. Discussion—"Pathology of Pulmonary Tuberculosis," by Dr. John Caven ; "Earliest Diagnosis and Selection of Cases for Sanitarium Treatment," by Dr. N. A. Powell ; "Home Treatment and Prevention of Tuberculosis," by Dr. T. F. McMahon ; "Care and Prevention," by Dr. Charles Sheard. General discussion will follow.

Evening Session—Association Dinner.

JUNE 14th.—*Morning Session*—Sections, Medical and Surgical.

Afternoon Session—Demonstration of a case of Coccidial Infection with photographs by Dr. D. W. Montgomery. Discussion in Surgery. Dr. Christian Fenger, of Chicago, will open this discussion with a paper on "Diseases of the Kidney Amenable to Surgical Treatment," followed by Dr. Luke Tesky, Dr. John Wishart (London), Dr. R. B. Nevitt, Dr. Grasett, and others.

Evening Session—Business.

The titles of a large number of papers have been received, some of which will be read before the General Session, others in the sections. Papers must be in the hands of the secretary by May 20th. Full discussion of papers is desired. Harold C. Parsons, Secretary, 97 Bloor St. West.

DISPOSAL OF TORONTO'S SEWAGE.

Nature provided Toronto with a beautiful bay, the water as bright and clear as any in the world. The old man eloquent still basks in sunny memories of the primal beauty of the scene, and some of us who cannot lay claim to that appellation, can still remember when we could, without the slightest repugnance, nay, with great gusto, take a plunge from off the lumbermen's rafts and booms at the Northern elevator. It was a pleasure to paddle about the water front of the city itself.

Now the waste of a busy and populous city is cast into the water front. This means from 15,000,000 to 20,000,000 gallons of sewage daily, carrying from 40 to 60 tons of solids—street washings, excreta, offal, and the wastes of our numerous industrial pursuits.

It is still true that Toronto is one of the most beautiful and charming cities in the world, and that it presents in its residential, tree-lined streets, its suburbs, its parks and drives, and its extensive and convenient (though somewhat overcrowded) electric car lines, and its numerous cheap and commodious lake and railway outings, attractions to visitors such as few cities can offer. The quality of the water at the bay front, however, is not a very inviting introduction. It is also true that we can still, by paying a car or boat fare and taking a half-hour's trip, enjoy the *dolce far niente*, stretched on the grass or the sand beside the rippling waters on the far shore of the bay, or the surf-beaten cliffs of Scarborough Heights, or the Garrison Commons, or listening to the plash of the waves on Humber beach or the Island lake front. But we ought to restore to the toiler in the part of the city contiguous to the wharves and slips the privilege of taking his after-tea stroll or rest on the city side of a pretty bay, dotted with all kinds of craft, enjoying the sights presented and breathing the exhilarating air that rises from a clear expanse of water.

What we want to emphasize now is, that all this can be restored if we set about it in real earnest, and we of the medical profession ought to lend a strong helping hand. We do not expect to see all along the front the green slopes that once were. Although we are glad of the promised Lake Street park, it goes without saying that we want to see large warehouses and elevators, tall chimneys, tall masts and steamship funnels, but we would like to be able to stroll or paddle about and admire these with comfort and enjoyment.

At the present time the Medical Health Officer and City Engineer are making efforts towards providing the great remedy. In a future issue we propose to speak about the *materia* [and] *medicamenta* suggested and opinions given in the past, and will be open to suggestions, financial, sanitary or æsthetic. In the meantime we wish to impress upon aldermen and other powers that be the *necessity* of doing something—

doing and not merely spending money in obtaining opinions. We will commence with Dr. Sheard's testimony and will be glad to get that of others. He says :

"There are many conditions within the municipality which require consideration, and which demand an improvement of the general sanitary state. Prominent among these is the adoption of some process for the ultimate disposal of the sewage of the city. Numerous complaints have been made to the Health Department regarding various localities along the water front, and I have during the past year furnished to the Local Board of Health a special report dealing with the entire question, and urging upon the Council the wisdom of deciding upon some definite plan for dealing with the city sewage."

On the necessity, from a financial standpoint, of doing *now* what has to be done, he says :

"It is a matter which cannot be very long delayed. With the improvements shortly to be made in the city's harbor it becomes imperative that some definite plan should be agreed upon. The main obstacle to the carrying out of the work appears to be the expense of it. In a few years the water front will probably be rearranged in accordance with the extension and enlargement of the wharves to the Windmill line. Some of the sewers will be carried southward, and the ground prepared by filling, piling, etc., and great loss will be incurred to the municipality unless it is settled what method is to be adopted to ultimately deal with the sewage of the city of Toronto, and to proceed with the subsequent work relating to the improvement of the water front with due regard thereto."

When we give the history of municipal action in the past it will be seen that our city fathers have not been so negligent of the question as we might think, and that our city officials have long been battling for the right. Tall city towers and ambitious commercial schemes have, however, drained away the sinews of war. Let us now convince the people that the sewage question is next—a very patient but important "next."

CONDITION OF SUMMER RESORTS.—We are very glad, indeed, to find that the general public are commencing to attach some importance to the sanitary condition of the summer resorts

which they so largely patronize during the hot summer months. A great improvement in such conditions has occurred in recent years, and in some of the resorts the arrangements are in all respects satisfactory. Dr. Bryce, the Secretary of the Provincial Board of Health, has paid a great deal of attention to the matter during the last few years. We notice by the daily press that he left Toronto about the middle of May on a tour of inspection through the Muskoka District and other parts of Northern Ontario. He is armed with authority to enforce certain rules enacted by the Board ; but we understand that it is not the desire of the provincial authorities to deal too severely with those who do not live up to the letter of such rules. A great effort, however, will be made to have everything made right, where things exist which are offensive or dangerous to health.

MEDICAL ITEMS.

A congress for the study of tuberculosis was held in Berlin from May 24 to 27, 1899.

Sir William Turner, President of the General Medical Council of Great Britain, received the honorary degree of LL.D. from the University of Cambridge, April 27th.

The Medical and Chirurgical Faculty of Maryland held its centennial meeting in McCoy Hall, at Johns Hopkins University, April 25-28, 1899, under the presidency of Dr. S. C. Chew, of Baltimore.

The Mississippi Valley Medical Association has changed the date of its annual meeting from September 12-15 to October 3-6, 1899, inclusive.

The American Climatological Association held its sixteenth annual meeting at the Academy of Medicine, New York City, May 9, 10 and 11, 1899, under the presidency of Dr. Beverly Robinson, of New York.

His Royal Highness the Prince of Wales has appointed the following as delegates on behalf of the National Association for the Prevention of Consumption to the Berlin Congress for the Prevention of Tuberculosis: Sir Hermann Weber, Mr. Malcolm Morris, Dr. Hillier, and Mr. C. Rube.

The autumn fete, to be known as the American festival, will be held in Chicago, beginning September 25th and ending October 9th, with the laying of the corner-stone of the Federal building, when the President and the Cabinet will be in the city. During this time the railroad fare to Chicago from all points will be a flat one fare rate for the round trip, without the necessity of certificates or signatures. The limit of the tickets is so long that a protracted stay can be made in Chicago in order to take advantage of the clinical facilities of the meeting, as well as enjoy the added attractions of the festival.

The American Association of Obstetricians and Gynecologists will hold its twelfth annual meeting at Indianapolis, Tuesday, Wednesday and Thursday, September 19, 20 and 21, 1899, under the presidency of Dr. Edward J. Ill, of Newark, N.J. Dr. Ill has appointed the following-named delegates to represent the Association at the third International Congress of Gynecology and Obstetrics, to be held at Amsterdam, August 8-12, 1899: Dr. J. H. Carstens, of Detroit; Dr. Clinton Cushing, of Washington; Dr. W. E. B. Davis, of Birmingham; Dr. B. Sherwood-Dunn, of Boston; Dr. L. H. Dunning, of Indianapolis; Dr. George Ben Johnston, of Richmond; Dr. L. S. McMurtry, of Louisville; Dr. J. B. Murphy, of Chicago; Dr. Charles A. L. Reed, of Cincinnati; Dr. A. Vander Veer, of Albany, and Dr. X. O. Werder, of Pittsburgh.

INTERNATIONAL CONGRESS FOR GYNECOLOGY AND OBSTETRICS.—The third International Congress for Gynecology and Obstetrics will take place at Amsterdam from the 8th to the 12th of August, 1899, under the patronage of the Minister of the Interior. The leading questions for discussion will be the following: 1. The surgical treatment of fibro-myoma. 2. The relative value of antiseptics and improved technic for the actual results in gynecological surgery. 3. The influence of posture on the form and dimensions of the pelvis. 4. The indication for Casarian section compared to that for symphyseotomy, craniotomy and premature induction of labor. MM. Doyen, Howard Kelly and Schauta will treat the first question; MM. Bumm, Richelot and Lawson Tait the second; MM. Bonnaire, Pinzani and Walcher the third, and MM. Leopold, Pinard, Pestalozza and Fancourt Barnes the fourth. The official languages are: English, French, German and Italian.

UNIVERSITY OF TORONTO—NEW DOCTORS OF LAW.—At a meeting of the Senate of the University, May 18th, it was decided to confer the honorary degree of LL.D. on the following

gentlemen: His Excellency the Governor-General of Canada; Dr. J. Beattie Crozier, of London, England, M.B. University of Toronto, 1872, on account of his "reputation as a writer and thinker." He is best known by his two works, "Civilization and Progress," and "History of Intellectual Development." Dr. Geo. M. Dawson, a son of Sir William Dawson, and one of the best known Canadian scientists; Mr. J. C. Glashan, of Ottawa, an educationalist and mathematician of the highest rank; Dr. G. M. Grant, Principal of Queen's University; Sir John Murray, of Edinburgh, a distinguished scientist. Dr. Wm. Osler, Professor of Medicine, Johns Hopkins University, Baltimore, formerly Professor of Physiology and Pathology in the University of McGill College for several years; also for a time Professor of Clinical Medicine in the University of Pennsylvania; author of the well-known text-book, "The Principles of Medicine," and of numerous other smaller books and monographs. He received his preliminary training in Weston under the late Rev. William Arthur Johnson; a portion of his early medical training under the late Dr. Bovell and the Toronto School of Medicine. He passed the first year examination in the University of Toronto in 1869, but completed his medical course at McGill.

Personals.

Hon. Dr. Montague returned from the Pacific coast May 2nd.

Dr. F. T. Bibby has removed from Kimberley to Clarksburg.

Dr. Frank J. Farley, of Trenton, went to New York early in May.

Dr. A. E. Gardner, of Vars, Ont., was married to Miss Salter, of Belleville, May 17th.

Dr. F. A. Rosebrugh, of Hamilton, was married to Miss Palmer, May 25th.

Dr. W. B. McKechnie, of Revelstoke, B.C., was married to Miss Cowen, May 15th.

Dr. R. D. Rudolf, of Toronto, sailed for England on the *Lake Superior*, May 16th.

Dr. J. Algernon Temple, of Toronto, spent a week in New York about the middle of May.

Dr. R. W. Large, formerly of Toronto, was married to Miss Geddes, Vancouver, May 22nd.

Dr. D. W. Montgomery, of California, is now visiting with his friends on Isabella Street, Toronto.

Dr. J. M. Platt, of Picton, ex-M.P. for Prince Edward County, has been appointed warden to the penitentiary in Kingston.

It was announced May 16th that Dr. George S. Rennie, of Hamilton, would be married to Miss Nathalie Hamilton, May 30th.

Dr. Jas. F. W. Ross left Toronto May 15th to spend a couple of weeks in his fishing shanty in the wilds of Muskoka beyond Algonquin Park.

Dr. Harry B. Anderson, of Toronto, has gone to England and Germany, and expects to return in good time for the winter session in Trinity Medical College.

Dr. James E. Graham, of Toronto, is considerably improved in health since the advent of warm weather. He went to Muskoka, May 24th, accompanied by Dr. W. P. Caven, who returned the following day.

Dr. Thaddeus A. Reamy, of Cincinnati, was tendered a complimentary dinner on Friday, April 28th, 1899, in celebration of his seventieth birthday. It was attended by 170 of his professional friends, with here and there a layman of conspicuous prominence.

Dr. Harry Way (M.B. Tor. '92), of Chicago, spent a few days in Toronto in the latter part of May. He gives glowing reports respecting the Chicago Canadian contingent.

Dr. H. W. Spence (Tor. '98), returned from England a few days ago. After spending a short time at his father's residence, Jarvis Street, Toronto, he went away to act as *locum tenens* for a month.

Dr. J. D. Thorburn, of Toronto, had a slight septicemia during the first week in May. Fortunately, the symptoms, which were somewhat serious for a couple of days, subsided rapidly, and his restoration to health was soon complete.

Dr. R. M. Bucke, Medical Superintendent of the London Asylum for Insane, has written a very interesting article, entitled "Portraits of Walt Whitman," which appears in the March number of the *New England Magazine*.

Dr. Thos. H. Middlebro (Tor. '92) was one of the resident physicians in the Toronto General Hospital, 1892-93. Since that time he has practised in Owen Sound, and has fairly earned a holiday, which he is now enjoying. He left Toronto May 12th with Dr. Anderson, and will do some post-graduate work in Great Britain and Germany.

Dr. Charles Jewett, of Brooklyn, professor of obstetrics and pediatrics at the Long Island College Hospital, was on April 29th, 1899, appointed by the trustees to be president of the faculty of that institution—a place made vacant by the resignation of Dr. Alexander J. C. Skene. Dr. Jewett has been a prominent teacher for nearly twenty years.

Dr. G. R. McDonagh paid a flying visit to New York in the latter part of May.

Dr. J. T. Duncan is now in London, giving special attention to the work in ophthalmology.

Dr. H. H. Oldright has removed to St. Catharines, having purchased from Dr. A. Leitch the house and good-will of his practice. Dr. Leitch has been in St. Catharines for twenty-five years, and has removed to St. Thomas. Dr. H. H. Oldright's residence, which is centrally located, is for sale.

Obituary.

JOHN R. FLOCK, M.D.

Dr. Flock died at his residence, London, Ont., May 16th, 1899. He received the degree of M.D. from the University of Victoria College in 1848. He acted as coroner for the city of London for many years.

CHARLES FAYETTE TAYLOR, M.D.

Dr. Taylor, of New York, well known as a very skilful orthopedic surgeon, died in April, aged 72. He was the inventor of many mechanical appliances which are now used in orthopedic surgery, and wrote many interesting articles and books, of which the best known in Canada is "The Mechanical Treatment of Hip-joint Disease."

SIR WILLIAM ROBERTS, B.A., M.D. LOND., F.R.C.P., F.R.S.

Sir William Roberts died April 16th, aged 69. He first made his reputation, which was world-wide, at Manchester, where he was well known for many years both as a teacher and a practitioner. His best known work was "A Practical Treatise on Urinary and Renal Diseases." In 1889 he removed to London, chiefly to obtain some leisure from an exacting practice. He had a severe attack of influenza, and in 1898 serious symptoms, due to a severe internal affection, appeared, and steadily grew worse until death came.

Mrs. Aikins, of Toronto, wife of Hon. J. C. Aikins, and mother of Dr. W. H. B. Aikins, died May 25th, 1899.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. E. GRAHAM, J. FERGUSON, T. McMAHON,
H. J. HAMILTON, AND INGERSOLL OLMSTED.

Vaccination and Small-pox.

Dr. Redolfo Livi, in *Brit. Med. Jour.* for April 29th, 1899, gives the statistics of the Italian army, as regards vaccination and small-pox, since 1867. There have been 3,095,571 vaccinations. These statistics prove clearly that small-pox was much more fatal among those not vaccinated than among those who had been successfully vaccinated. On a basis of 10,000 there was an average of 280 cases of small-pox and 55 deaths where there had been no vaccination; but where vaccination had been recent and successful, in the army, there were about five cases and no deaths in the same number. The conclusion is clear that small-pox attacks a very much larger and causes a much higher death-rate among the non-vaccinated than among the vaccinated. When it does attack a properly vaccinated person the disease is much less severe. There is no ground for scientific opposition to vaccination.

Rheumatoid Arthritis and Gout.

Wm. Ewart, in *International Med. Jour.* for April, 1899, discusses the relationship between these diseases. He concludes there are wide differences in clinical history, pathology and treatment. When they do come into contact is where a person with gout becomes afflicted with rheumatoid arthritis, or *vice versa*. In pure rheumatoid arthritis low living with alkalies and colchicum would be poison to them. The treatment of the joints by dry heated air is very helpful. The internal use of abundance of water and attention to the bowels aid the elimination of toxins and waste products. Every effort should be made to raise the health and strength of the patient. Tonics are indicated, and arsenic seems to be of marked value. The diet should be easily digested, varied and nourishing. Stimulants are indicated, especially good red wine, in all cases where there is anemia.

Oyster Fever.

Dr. John W. Moore, in *The Practitioner* for March, 1899, has an article upon this subject. His observations are very

interesting. He considers that oyster poison produces three distinct forms of febrile disease. The oyster toxin may act by causing a very acute illness. Within a few hours the person is suddenly seized with acute gastro-intestinal disturbance, as nausea, vomiting and purging. After a few hours of misery the person recovers rapidly. The second form—a continued fever. This fever is ushered in by chills, and lasts from a week to two weeks. There is much depression, and the case may end fatally by coma, convulsions, peritonitis, or heart failure. In some instances the acute form may be followed by this more chronic type. Where elimination in the acute cases is not complete poisonous albuminoses are formed. These give rise to severe nerve symptoms, as paresis, heart failure, coma, etc. Then, thirdly, there is true typhoid fever, as has been so clearly pointed out by Sir W. H. Broadbent.

The Liver in Diabetes Mellitus.

M. Le Dr. Piéry, of the Hospital Lyon (*Gazette des Hôpitaux*, February 4th, 1899), enters very fully into the rôle of the liver in all the forms of diabetes mellitus. In diabetes, with the condition of bronzed skin described by Hanot, in 1882, there are distinct diseased conditions in the liver. The organ is hypertrophied and has the appearance of old leather. The cells are more or less atrophied and infiltrated with a brownish black pigment. In pancreatic diabetes the more recent observations go to show that there are changes in the liver also, as hypertrophy and sclerosis. Enough attention has not yet been given to its minute anatomy in such cases of diabetes to enable one to form a definite opinion. When dogs are rendered diabetic by destruction of the pancreas, the liver becomes diseased. In nervous diabetes, as in the pancreatic, the liver is almost always hypertrophied. This hypertrophy is due to cirrhosis or fatty degeneration. In arthritic or constitutional diabetes the liver has been found either hypertrophied, atrophied, or in a state of fatty degeneration. These researches go to show that the liver plays an important part in diabetes.

The Gonococcus in Ulcerative Endocarditis.

Dr. Henry W. Berg (*Med. Record*, April 29th) mentions the interesting facts that in a patient suffering with gonorrhea there were present the complications of pyelo-nephritis and ulcerative endocarditis. The temperature rose to 105° F. on the day of the patient's death. There were found vegetations and ulcers on two of the aortic valves. There was slight articular rheumatism. In the vegetations and ulcers on the aortic valves and in the pelvis of the left kidney were found diplococci that were regarded as gonococci. The finding of gono-

cocci, in pure culture, in the vegetations of ulcerative endocarditis, complicating gonorrhea, would seem to prove that the gonococcus had been carried to the site of the lesion, and had caused the ulceration. This would seem to prove that a mixed infection is not necessary in all cases.

New Method of Treating Phthisis.

Dr. William Murrell, in *Med. Brief* for May, 1899, has an exceedingly interesting article on the above subject. His method, as the result of much experimentation with different preparations, is the inhalation of formic aldehyde. This is a definite chemical compound having the formula CH_2O . It is a gas obtained by the oxidation of methyl alcohol. It will form a 40 per cent. solution readily with water. For inhalation, usually a 6 per cent. solution is strong enough. Compressed air is made to bubble through the solution. The above solution may be made stronger or weaker to suit the patient. It sometimes causes some laryngeal irritation. The formaldehyde should be inhaled once or twice a day. In some cases it is good to drop 20 to 25 minims of the solution on a piece of lint and fasten it in front of the chest. This is renewed every three or four hours. Very good results have been obtained so far.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

A Case of Perforation of Gastric Ulcer; Operation; Second Operation and Recovery.

Dr. Sidney Phillips and Mr. A. Quarry Silcock report the following case which presents several features of interest. In the first place, thirty-three hours elapsed from the time at which the perforation occurred to the time of operation and yet the patient recovered. The successful result cannot be attributed to the absence of the gastric contents, for only an hour previously to the perforation she had partaken of a meal and peptonised milk was given even later. The fortunate issue must be ascribable, in part, to the smallness of the aperture of perforation and the rapid formation of peritoneal adhesions. The rarity of a successful result in perforation of the stomach when more than twenty-four hours have elapsed between the perforation and the operation is well known. This case also illustrates the great value of a gauze drain, for its presence rendered harmless the failure of the first attempt at closure of the perforation. The occurrence of parotitis in abdominal cases is always of interest.

and Mr. Silcock's suggestion as to the cause of this complication is very ingenious and may serve to explain many at least of the cases, if not all. We consider his recommendations as to the prophylactic treatment to be well worthy of trial.

A girl, aged 20 years, had in September, 1896, an attack of pain in the upper part of the abdomen with vomiting, and kept her bed a week; since then she had been subject about every three months to attacks of the same character, but of less severity and without vomiting. Between the attacks she had been free from pain and had not restricted her diet in any way. She had an attack in February, 1898, and one in May of the same year. There had never been any hematemesis. The attacks were regarded as hysterical. She was unusually well during August and until September 14th, 1898; on the 13th she ate a raw apple as she had frequently done before and had no discomfort after it. On the 14th she ate breakfast as usual, and at 11 a.m. she took some cocoa and bread and butter; one hour later she experienced severe pain in the upper part of the abdomen and lay down on the floor. Soon afterwards she vomited. Dr. A. B. Rendel, who saw her in the afternoon, found her somewhat collapsed, and he had a bed made up for her in the room where she was taken ill. She had peptonised milk and ice to take. The evening temperature was 100° F.; during the night there was pain in the abdomen and shoulders and she vomited twice. She was sent to St. Mary's Hospital on the 15th, at 5 p.m. She was a well-nourished, healthy-looking girl. The face was flushed, there were slight dark areolæ under the eyes, the features were a little pinched, the tongue was clean, abdominal movements were a little restrained, and there was hyperæsthesia over the whole abdominal surface. She complained of pain in the right iliac fossa, but there were no dullness on percussion, no tumor, and no tenderness in this region; there was, however, acute tenderness over an area of about two square inches immediately to the left of the linea alba just above the level of the umbilicus; here there was more resistance than elsewhere and slight defect in percussion resonance. Liver dullness could be mapped out in the margin of the thorax. No stomach note could be obtained except in the region of the left axillary line; there was no bell sound obtainable. The pulse was 120, very sudden and jerky, and the temperature was 100.2°. She had vomited just before admission.

The local tenderness and the tension of the left rectus muscle suggested that the lesion was in the situation of the stomach and the symptoms pointed so strongly to a perforation that the pre-existence of an ulcer of the stomach seemed certain, though the history of paroxysmal attacks of pain with intermissions of

many weeks was unlike the course of ulcer as generally described. The fever, the quick pulse, and the flush of the patient's face made the presence of peritonitis certain and the general condition would, I felt sure, rapidly become worse. A little delay was occasioned in obtaining the consent of the mother of the girl to an operation.

Operation.—At 9 p.m., ether being administered, an incision two and a half inches long was made by Mr. Silcock a little below the xiphoid cartilage in the linea alba. Recent adhesions of lymph were found in all directions on opening the peritoneum. The wound was now lengthened and a horizontal cut was made to the left side for one and a half inches. A good deal of serum escaped, and upon examination a small perforation was found a little to the left of the linea alba in the lower part of the anterior wall of the stomach, through which escaped a small quantity of frothy mucus. The surrounding peritoneum was covered with soft adhesive lymph. After cleansing the wound several unsuccessful attempts were made to close the perforation by invaginating its edges and stitching with Lembert's sutures. However, by the aid of long rectangular cleft palate needles and silk sutures this was ultimately effected. The wound was washed out with sterilized water, the greater part of the vertical parietal incision was closed with silk-worm gut sutures, and a large double cyanide gauze drain and dressing were applied. The operation lasted one and a half hours. On the 17th the temperature was from 100° to 102°. There was a copious greenish discharge; the sutures had evidently given way, and by the aid of an electric lamp the perforation could be seen at the bottom of the wound. On the 19th there was acute pain with tenderness and swelling of the left parotid gland, the temperature rising to 102°. Belladonna fomentations were applied, and the acid drops were ordered to be sucked to stimulate the flow of saliva; the nutrient enemata were well retained. On the 21st the maximum temperature was 101°. The discharge was offensive. Iodoform gauze plugging was substituted for cyanide. On the 22nd the temperature was 100.4°. There was dullness with some tenderness in the left hypochondrium, and Mr. Silcock passed a long probe from the wound towards the left into a cavity from which the offensive discharge could be seen to flow, and decided to at once make a counter opening. Under an anesthetic the wound was well irrigated. A counter opening by a horizontal incision one and a half inches long was made in the eighth left costal space; a large drainage tube was then passed from one wound to the other and the cavity was again irrigated. The little finger inserted through the perforation detected no signs of ulceration of the surrounding mucous membrane. With

some difficulty the edges of the perforation were invaginated and approximated by three Lembert's sutures. The sutures were deeply passed and must have included nearly the whole thickness of the gastric wall. The wound was plugged lightly with cyanide gauze and a dressing was applied. The patient recovered from the anesthetic without sickness. The temperature rose to 104° in the afternoon and fell to 102° by night. The wound was dressed at night; it was less offensive and there was no discharge from the stomach. On the 23rd the maximum temperature was 100.6° . The discharge was still offensive, but none came from the stomach. All parts of the wound were covered with healthy granulations. On the 24th she took food by the mouth for the first time, three drachms of sweetened barley water being allowed every two hours. There was no leakage from the stomach. From this time forward the patient made an uninterrupted recovery. On November 21st she got up, the wounds being practically closed, and was discharged to a convalescent home on December 14th.

The failure to effect permanent closure of the perforation at the first operation and the success attending the second, show how unnecessary it is, as often has been insisted, to do more than provide for the exit of the extravasated stomach contents from the peritoneal cavity, where that is possible, in cases in which the complete operation would, from its complexity or long duration, endanger life. The occurrence of parotitis in abdominal cases is not infrequent. May it not be due to the fact that such patients often enough suffer from stomatitis, for but little food is taken and that fluid in kind, or possibly none may be allowed, as in our case, the mucous membrane thus becomes fouled, there is no stimulus to the flow of saliva; consequently, infective organisms may find their way up the parotid or other salivary duct, the current of fluid in which may be materially lessened in force and volume. Hence it is well to see that the mouth and teeth are cleansed, and possibly it may be a good thing to allow the patient to stimulate the flow of saliva by some such means as that adopted in our case. The patient reported herself in January, 1899, as perfectly well.—*Lancet*, 25th March.

ORTHOPEDIC SURGERY.

IN CHARGE OF CLARENCE L. STARR, M.D.

Metatarsalgia.

Jones and Tubby (*Annals of Surgery*, September, 1898) have published a very interesting paper on metatarsalgia, or Morton's disease, in which they disagree with the commonly accepted theory as to the etiology of the disease. Most surgeons accept the theory of Morton, that the pain is due to compression of the superficial branch of the external plantar nerve between the heads of the fourth and fifth metatarsal bones. The authors, however, hold that the clinical symptoms as well as the anatomical facts do not support this, but do accord much better with the theory of a breaking down of the transverse arch of the foot and a treading upon the nerve.

The treatment in all severe grades outlined as the simplest and best is a resection of the head of the fourth metatarsal bone.

Dr. Whitman, in an article in *Medical Record* of August 6th, 1898, shows that there may be a flattening of the transverse arch and a considerable degree of laxity of the ligaments joining the metatarsal bones, and as a consequence still get pressure from the overriding, lax, fifth metatarsal bone.

Dr. V. P. Gibney (*Medical Record*, February 4th, 1899) read a paper before the Practitioners' Society, in which he briefly outlines the etiology and pathology of metatarsalgia and the treatment from an orthopedic standpoint.

Metatarsalgia, commonly known as "Morton's toe," after Dr. Thos. G. Morton, of Philadelphia, is a neuralgia affecting the metatarsal region. The neuralgia is due to pressure of the branches of the external plantar nerve, seldom of the internal. Whether the pressure is due to pinching of the nerve between the heads of the fourth and fifth metatarsal bones, or to pressure from ligamentous thickening and flattening of the transverse arch, is difficult to ascertain. The anatomical relationship is such that the head of the fifth metatarsal is from three-eighths to one-half inch posterior to that of the fourth, and the digital branch of external plantar nerve lies between. The fourth and fifth metatarsals are much more loose in their attachments than the others, and can be readily rolled one upon another. The first, second and third are more fixed and do not permit of so much movement, and it is an interesting clinical fact that the internal plantar nerve is seldom implicated.

The author cites fifteen cases of Jones' cured after removal of the head of fourth metatarsal, and equally brilliant results by Morton. Also that two cases came under his observation

where pain persisted after operation, which was entirely relieved by specially constructed shoe.

Dr. Gibney further says he has yet to encounter a case which did not yield to treatment by properly constructed shoes, and he is unwilling to recommend operation when shoes will give permanent relief. In analyzing fifty-seven cases he finds eighteen cured, *i.e.*, the prescribed shoe is no longer necessary; and thirty-nine relieved, *i.e.*, are still wearing shoe or some modification of it. In a shoe for metatarsalgia the upper must fit accurately over the instep and compress the proximal ends of metatarsals; no pressure against distal ends and yet the width not so great as to allow too much expansion. Insole should be slightly convex across metatarso-phalangeal region to preserve the transverse arch. If the longitudinal arch is weak, strong shanks of partially tempered steel should extend well forward, almost to distal ends of metatarsals.

Calot's Treatment of Spinal Caries.

Lange, of Munich (*Wiener Klinik*), very clearly sets forth the present position of most surgeons with regard to the forcible correction of the curvature in Pott's disease. He holds that while in the hands of skilful men, the operation is not attended with much risk to life, yet the treatment is open to serious objection. The early results may be exceedingly promising, but as time goes on, the improvement in the majority of cases does not prove permanent.

The gap which is made by the opening up of the carious vertebræ, is not yet proven to fill up with bone or anything firmer than fibrous tissue, at the best. In most cases the gap is probably filled with blood, detritus and pus, or later with tuberculous granulations. These are never firm and must leave the spine very unstable.

In some cases it is possible that osseous fusion of the arches or processes of the diseased vertebræ may take place, and then the straightened spine may acquire a certain degree of strength or stability. Such a spine, however, must always be in danger of fracture from slight injury, and fracture is likely to be attended with serious or even fatal results from compression of the cord.

According to Lange, the only class of cases in which Calot's treatment is indicated, is that in which there is associated with the angular curvature a persistent paralysis of the lower extremities. As there can be no doubt of the efficacy of the treatment in this class of cases, it is thought by the author that the surgeon is warranted in assuming the risks, immediate and remote, of forcible correction in order quickly to relieve the patient from the distressing symptoms attendant on paraplegia.

Forcible Reduction in Pott's Disease.

The *Medical Record* thus summarizes the views of Dr. Albert H. Freiburg (*Cincinnati Lancet-Clinic*) on the forcible reduction in Pott's disease:

1. Forcible reduction involves danger to life; this is, however, not sufficiently great to warrant its banishment, especially in properly selected cases.

2. The reduction of firmly ankylosed kyphoses is to be condemned.

3. The application of this method is justifiable in cases of paraplegia when immobilization has failed.

4. It is exceedingly probable that many kyphoses treated by this method will recur.

5. Forcible reduction may prove of great value in severe rachitic scolioses and kyphoses, and under these conditions will probably be found to be almost without danger.

Cyclo-Therapeutics.

Dr. Siegfried, of Bad Nauheim (*Brit. Med. Jour.*), has strongly recommended cycling as a means of obtaining active and passive motion in the lower limbs which are at the same time relieved from supporting the body weight.

He employs the exercise in ankylosis from joint disease, in muscular atrophies, peripheral paralysis, cardiac insufficiency and the like.

The author draws his conclusions from study of ninety-seven cases in which there were over 400 pulse tracings made. He gives notes of a case of rheumatism with flexion of left hip and knee, and more or less complete ankylosis, cured so as to be able to ride thirty-five miles in a day, five months after commencing treatment, when he had to be assisted to a seat on the machine.

Three other cases are noted, one of gout with almost complete cure of symptoms, physical and mental, and one of cardiac insufficiency in which the tracings showed marked improvement in rhythm.

The author insists that patients must be taught that cycling for them is a matter of treatment and not of amusement, and that the physician must keep the exercises under his own observation.

The writer's experience is with a single case of rheumatic arthritis, and although some benefit was obtained by daily exercise on the wheel, yet the improvement did not seem permanent, and the stiffness returned as the wheel was laid aside for the winter.

OPHTHALMOLOGY AND OTOTOLOGY.

IN CHARGE OF G. STERLING RYERSON.

Simple Enucleation not a proper Surgical Procedure.

H. W. Morton, Minneapolis (*Annals of Ophthalmology*, January, 1899): The indications for enucleation of eye-ball are: 1. Traumatism or sequelæ of traumatism; 2. Inflammatory processes and their sequelæ; 3. Tumors whether intra or extra ocular. He thus describes the operation of *implantation*, not Mule's operation, in which the capsule of Jenon is used as a retaining cup for the glass sphere instead of the sclera. He claims advantages over excision operation. Implantation was also devised by Frost, of London, each originating without knowledge of the other's work. The advantages are:

ENUCLEATION.

1. Complete removal of globe and contents.
2. No stump.
3. Disturbances of all muscular relations and arrest of movement.
4. A fixed staring cup attracting attention.
5. Patient shuns society.
6. Arrested development of orbit in children.
7. Epiphora.

8. Accumulation of mucus, etc., in the artificial eye.

IMPLANTATION OR MULE'S OPERATION.

1. Retention of the framework of the eye.
2. A firm round globe forming a perfect support for an artificial eye.
3. Perfect harmony of muscular movement retained.
4. When fitted with selected eye defies detection.
5. No qualms about personal appearance.
6. No interference with growth of orbit.
7. Owing to better position of eye, tears drain away perfectly.
8. Not the case where a sphere is worn.

Protargol.

Wicherkiewicz, Krakau (*Die Oph. klinik*, September, 1898). W. says his experiences with protargol have been decidedly satisfactory. It has silver for a base and contains 8.3 per cent. more than the new silver salts. Argentanin contains 6.35 per cent., argonin 4.2 per cent. Protargol is not as good as nitrate of silver in acute granular or catarrhal conjunctivitis. Is particularly useful in ulcers of the cornea in 5 per cent. solution. In suppuration of the lachrymal passages it is the best medi-

cine we have. The tear sac and canal should be dilated fully and washed out, then a 10 to 20 per cent. solution of protargol injected. Protargol is, according to W., an absolute specific in blennorrhoea of new-born infants or adults. He uses a 20 per cent. solution. He also uses a 1-10,000 sublimate ointment. He has compared work of protargol and nitrate of silver, in many cases using one in one eye and the other in the other, with the above results.

Modern Views on Trachoma.

Schullhof (*Wien. med. Presse*, Nos. 24, 25, 1898) gives a complete summary of recent work in etiology, pathology and treatment of trachoma. He quotes statistics. In thirty Austrian counties there were in 1896 nearly 30,000 sufferers, while in the Russian army in 1896 the number of sufferers reached the enormous proportion of 62 per cent. The author draws the following conclusions as the result of his investigations: Its appearance is favored to a great extent by special conditions, such as race, locality, general nutrition and occupation. The actual natural history is not yet established; experiments and inoculations on animals have failed so far. The hypertrophy of the conjunctiva is the principal characteristic of the morbid process. Hitherto the following has been accepted as the best treatment: Solution of nitrate of silver or its substitutes, argonin or protargol, sulphate of copper, washing with sublimate, galvano-cautery, and in very obstinate cases, jequirity, peritomy, and removal of hypertrophic folds. Among the newer remedies are guaiacol, glycerine, ichthyol, sozo-iodol and electrolysis. (He does not mention the most important, Darier's treatment and cataphoresis.—G. S. R.)

A Suggestion for Anesthetists.

Everybody who has had experience in the administration of chloroform or ether to young subjects has had trouble in getting them started without a scene, which in private practice is very trying to all concerned. I have been in the habit for the past two years of having a little eau de cologne or other perfume dropped on the inhaler to begin with; then after a few minutes chloroform is added. This procedure has the effect of lessening the child's initial terrors, and saves wear and tear both to the operator and to the anxious parents.

G. S. R.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Fibrinous Rhinitis.

Gerber (*Monat. f. Ohrenheilkunde*, July, 1898). In seven of the cases examined virulent diphtheria bacilli were found. In other cases, the number not being given, streptococci, staphylococci, diplococci, etc., were found without the Klebs-Löffler bacillus. Gerber considers that the clinical pictures may be identical while the diseases are different. Of the two, true diphtheria is the more severe affection, and, he says, may undoubtedly be present without membrane. Non-diphtheritic fibrinous rhinitis usually affects children. It runs a favorable course of two or three weeks, rarely affecting other mucous membranes. Gerber considers the difference between this and true diphtheria to be one of degree only, dependent upon the vulnerability of the mucous membrane.

Tubular Epithelioma of the Nose.

Bronner (*Jour. of Laryn., Rhin. and Otol.*, March, 1899) showed a microscopic specimen of tubular epithelioma of the nose. The growth which was the size of a large pea had been removed from the nasal mucous membrane above the front end of the lower turbinated. The operation was performed ten years ago when the man from whom it was taken was forty-seven years old. There was a history of partial nasal obstruction and frequent hemorrhage from the nostril. The growth was removed by scissors, after which the bone was burnt with the galvano-cautery. There has been no recurrence. The Clinical Research Association reported it as a case of malignant growth of epithelial type, which might be classed as a tubular epithelioma. At the periphery beneath the mucous membrane, tubules with a definite lumen could be seen.

Two Naso-Pharyngeal Polypi of Enormous Size.

Weil (*Weiner med. Woch.*, January, 1899) reports one case. It was attached all along the posterior edge of the vomer. Two hemispherical processes filled the naso-pharynx and caused complete nasal obstruction. One large branch of the polypus filled the right nasal cavity as far as the anterior naris, while a pear-shaped portion, whose lower extremity could only be seen by strongly depressing the tongue, covered the whole post-pharyngeal wall. Weil removed it through the post-pharynx in one piece. Its weight was 45 grammes.

Max Thorne (*Laryngoscope*, April, 1899) reports the other case, which was even larger. Hearing was much diminished,

there was complete nasal stenosis, and the voice had the characteristic nasal twang. The left nasal fossa was free, but the right one, posteriorly, was filled with the mass. The attachment was at the posterior portion of the right nasal fossa. It was removed *en masse* by means of a cold wire snare passed up behind the palate and round the growth. It was composed of many large and small nodules, some of them of the size of a small hen's egg. The pedicle was slender, not larger than a lead-pencil. The weight was fifty grammes. The patient was a man aged thirty years.

The abstractor might likewise refer to one which he removed from the naso-pharynx of a woman aged 31, on April 24th, 1899. The physician who brought this case for treatment had already removed a polypus from the left nostril. The probability, however, is that this was only a projection forward of the original growth into the naris from the naso-pharynx. On the left side there was complete stenosis. Post-nasal examination revealed a large lobulated, firm and pinkish tumor, filling the post-nasal pharynx. A cold snare was passed up behind the soft palate, and was adjusted over the growth by the index finger of the left hand. The whole was removed in one mass. Although much smaller than the two already recorded, its weight was half an ounce, or sixteen grammes.

The abstractor would also like to make one remark, which so far he has not observed in reading up the literature upon this subject, and that is—whenever a true fibroma edematosa, or naso-pharyngeal polypus, is successfully removed, it is almost invariably taken away in a single piece. It is difficult enough, and requires care and patience to adjust the snare well up around the body of the tumor; but it is next to impossible to press the wire closely up on all sides of the mass, so as to grasp only the pedicle. Still, when the snare is tightened, it does not sever a piece, but removes the whole. The reason is obvious on examining the structure of the polypus. The body has often been years in growing, and is dense, and fibrous and massive in character, while the pedicle is formed largely of blood vessels and mucous membrane, and contains comparatively little fibrous tissue; and hence yields more readily to the traction placed upon it than does the body of the tumor.

A Case of Thyroid Gland at Base of the Tongue.

Reintjes (*Monat. fur Ohrenheilkunde*, September, 1898) relates the history. Patient, male, aged twenty-five years, had always spoken as if he had a lump in his throat. He spat blood repeatedly. On examination a dark-brown, smooth, elastic swelling was discovered at the base of the tongue, between the circumvallate papillæ and the epiglottis. Electrolisis was

tried, but proved unsuccessful in its removal. Dr. Kolff operated. A Trendelenburg cannula was introduced into the trachea, the tongue was pulled forward, and the anterior pillars of the fauces temporarily divided. The strong capsule of the tumor. was then split horizontally, and the mass shelled out without much bleeding. The sac and the anterior pillars of the fauces were then stitched up. Recovery was excellent; but the normal thyroid could not be felt in its usual position. Since the operation symptoms of myxedema have appeared.

Paralysis of the Tongue—Stenosis of the Esophagus.

Sendziak (*Jour. of Laryn. Rhin. and Otol.*, March, 1899) gives "a contribution to the diagnostic signification of Rontgen's Rays." in connection with a male patient under his care, aged 55. For six months there had been difficulty in swallowing in the upper part of the esophagus. As the case was considered malignant, bougies had been used with some benefit. On examination of the larynx the right vocal cord was found to be paralyzed, and in the phonatory position. As this was an exceedingly rare occurrence, the left cord being the one usually primarily involved, examination by Rontgen rays was resorted to. It was found by transillumination, in front as well as behind, that the thoracic glands, the *ganglions peri tracheo bronchiques* of Baréty, could be distinctly seen as dark spots on the right side, while on the left they did not present any changes.

The writer says: "If in the above case the diagnostic signification of Rontgen's method, in view of the existence of cancerous process of the esophagus, in which the paralyses of the larynx are not among the great rarities, was not demonstrated, but rather confirmatory, so in the paralyses of the larynx resulting from compression by pathologically changed glands alone, which cannot be discovered by means of physical methods, Rontgen rays may have the greatest importance."

Wehnelt's New Interrupter—Improvement in X-Ray Apparatus.

MacIntyre (*Jour. Laryn., Rhin. and Otol.*, April, 1899) gives an account of the great improvement in technique which this new instrument has so recently produced. A further report of it will be found in the *Elektrotechnische Zeitschrift*, January 22nd, 1899. The advantages of this interrupter are simplicity of construction, great increase in the efficiency of the coil, and cheapness. The reduction in time of exposure, when photographing, is marvellous. The interruptions sometimes amount to 1,500 per second, and give great steadiness upon the fluorescent screen.

It naturally follows that the examination of the nose, accessory cavities, larynx and chest for foreign bodies will be greatly facilitated; while diagnosis of lesions in the soft tissues will be improved. Coils of any size will now be capable of exciting Crookes' tubes hitherto beyond their range. The interrupter is practically an ordinary cell, consisting of dissimilar metals in an acid solution. As a rule the one is made of lead and the other of platinum, the former being large and the latter very small.

Wehnelt describes the principle involved as follows: "If a current be sent by means of the electrodes of unequal surface through an electrolyte, the electro-motive force applied being considerably greater than the counter-electro-motive force of polarization, well-known light and heat phenomena may be observed on the electrode with the smaller surface. The latter is called 'active electrode.'"

Suprarenal Gland of the Sheep.

M. D. Lederman (*Laryngoscope*, April, 1899) believes that the extract of the suprarenal gland of the sheep has established a permanent position for itself in the therapeutic armamentarium of the rhinologist. By its use bloodless operations upon the nasal septum can be accomplished, and the "fear of blood" sentiment often met with in neurotic patients can be removed by the conscientious statement that little, if any, blood will be lost during the operation.

The difficulties heretofore met with in the preparation of the desiccated gland, can now, in a great measure, be removed. It is well known that the watery solutions rapidly become putrid and unfit for use. The addition of antiseptics, while they retard putrefaction, unfortunately interferes with the hemostatic properties of the gland.

After many experiments Lederman has found a 25 per cent. solution of glycerine in water to be a very satisfactory menstruum for solution of the gland; and glycerine itself, being somewhat antiseptic, prevents putrefaction without retarding the physiological action of the gland.

His method of application has been to apply the glycerowatery extract by means of cotton applications before and immediately after the application of cocaine. Constitutional symptoms of cocainism are thus avoided. Two or three applications of the suprarenal extract are sufficient. After its use the swollen mucous membrane rapidly assumes a contracted appearance, and an ischemic condition exists.

In next performing the operation very little blood will escape. Reaction, however, sometimes occurs and it is always judicious to insert a nasal tampon for twenty-four hours after-

wards. The best kind of tampon Lederman claims to be one of nosophen gauze, as it is antiseptic and keeps the wound dry.

His plan of preparing the desiccated gland is to place forty grains of the gland (Armour) in half an ounce of the glycerous aqueous solution. It is put in a wide-mouthed bottle and well shaken and allowed to stand in a room at ordinary temperature for forty-eight hours or so. During this time it is occasionally shaken. The mixture is then filtered through filter paper into a clean bottle. The result is amber-colored, and is ready for use. It is advisable to keep all but that required for immediate use in a cool place.

Diphtheria.

W. W. Lambert, Kamloops, B.C., "Sixteen Cases of Serum-treated Diphtheria" (*Montreal Med. Jour.*, March, 1899).

In all these cases the writer appears to have depended entirely upon serum-therapy for treatment, for there is no mention in his article of any other treatment whatever. Fortunately all the cases recovered but one. In this case the patient, aged fourteen months, did not come under treatment until the sixth day; and, notwithstanding that he administered, by injection, 12,500 units of antitoxine in three doses, the child died (!). The other fifteen cases were between the ages of seven years and fifty years. All were treated early, only two being as late as the third day. The largest amount of antitoxine given to any of them was 5,000 units to a boy twelve years of age. All were cured between the period of six hours and four days.

Five of the cases are reported as "diphtheria and scarlet fever" and eleven as "diphtheria."

Bacteriological examination is not mentioned (?), neither is the Klebs-Loeffler bacillus referred to in the article (?).

Speaking of serum Lambert says that it has no unpleasant or harmful effect upon the system, and should be used fearlessly. He claims that it is of great value in diagnosis, and is so certain in its action that should diphtheria be present the symptoms will ameliorate; and should no effect be produced the case will be scarlet fever or ordinary tonsillitis. He says that the injection should not be made in the arm as it will be followed by local dermatitis or urticaria.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Dysarthria and Delay in Learning to Speak following Cerebral Disturbance in Infancy.

A paper on this subject was read before the Royal Medical and Chirurgical Society of London by Dr. F. Parker Weber. The child upon whose case Dr. Weber based his paper, was of healthy parentage and was now seven years old. Until two years of age he was quite well and learning to talk like other children. At this time he was attacked by some acute disease, with cerebral symptoms. The illness left him unable to speak, but unaffected in any other way. When seen at five years of age he was able to utter peculiar sounds, doubtless an attempt at articulate language. He was physically fairly well developed, could hear well, understand what was said to him, and appeared to be of average intelligence. He then gradually began to speak, though with obvious difficulty in getting the sounds out and with great defects in pronunciation, dropping the consonants at the end of most words, and replacing the sounds of *k*, *g* (hard or soft), *ch*, and *s* by a *d*-sound or *t*-sound. Such "lalling"-like defects, together with stammering, rendered his speech most imperfect. He could recognize single figures and the letters of the alphabet, but could hardly recognize even short words when shown them on paper. He sometimes made mistakes when writing his own Christian name, although he had doubtless been repeatedly drilled at it. He could not recognize his name when shown it in printed characters. He seemed, in fact, almost word-blind. Such was his condition at the age of seven, when seen in January, 1899. The present case and similar cases differed from the typical ones of cerebral diplegia, with bulbar (pseudo-bulbar) symptoms, in the fact that the movements of the palate and the mechanism of swallowing were not in the least affected. A practical point in regard to the present case and similar cases was that the speech centres, although damaged by some early disease, seemed, nevertheless, capable of ultimate fairly normal development. This was confirmed in the present instance by the rapid progress which the boy was making since real trouble had been taken in teaching him by the oral and other methods.

Biliary Calculi in Children.

Three cases of biliary calculi in children were reported at the meeting of the London Pathological Society by Dr. G. T. Still (*British Med. Jour.*, April 8th, 1899). The cases had all been encountered within six months at Great Ormond Street

Hospital. The author believes the condition to be of rare occurrence in childhood. In the first case, aged nine months, there were vomiting, clay-colored stools, no jaundice and no colic. After death, which occurred from other causes, there were found eleven small black, friable calculi of pigment, three of which were impacted in the common bile-duct. The second case was that of a girl, aged eight months, who died with tuberculous meningitis. There was no jaundice or abdominal pain. There were three minute calculi of pigment in the gall-bladder. In the third case, a boy, there were abdominal pain and vomiting, but no jaundice; the calculi were of the same kind. The author had seen what he considered a fourth case during life, where there were recurrences of vomiting, abdominal pain, and jaundice. Altogether he had been able to collect twenty published cases, of which ten were in infants. In some, calculi had been found in the feces, in others at the necropsy. In many, colic and jaundice had been observed during life; the usual cause of infantile colic, nevertheless, was renal. The biliary calculi might be formed during intrauterine life, and the speaker thought that the viscosity of the bile in infancy, which led to a secondary stagnation, was probably connected with the formation of such concretions.

Syringo-Myelia with Pharyngeal and Laryngeal Lesions.

The proceedings of the Harveian Society of London, in the *British Med. Jour.* for April 15th, contains the following report of an unusually interesting case of this remarkable affection. The case was presented by Dr. Herbert Tilley, and gave the following history: The patient was a girl of fifteen in whom there was paresis of the right half of the palate, pharynx and right vocal cord. Other points of interest were the blunting of painful impressions and complete loss of thermal impressions all over both superior extremities and certain well-defined areas of the neck and trunk, atrophy of the small muscles of the hands—the latter being in the *main en griffe* position—moderate wasting of the flexors and extensors of the wrist, and slight nystagmic jerks of both eyes. A painless but severe burn on the hand and a gruffness of the voice, with some difficulty in swallowing, first led the patient to seek advice. The pharyngeal and laryngeal conditions were much improved during the past two months, during which time the patient had been taking strychnine.

Peripheral Neuritis.

The following interesting case of peripheral neuritis is found in the report of the Harveian Society proceedings (*British Med. Jour.*, April 29th, 1899). Patient, a child of three, was first

thought to be suffering from anterior poliomyelitis, but later the diagnosis was changed to peripheral neuritis. All the muscles of the shoulder and upper arm were flaccid and wasted. The history given was that in September, 1898, the child had a sore throat which "broke," with a discharge by the mouth. The next day there was complete paralysis of both arms and both legs; the child could not sit up. Improvement took place quickly. In a week the child began to use the left arm; in a month she could walk. For fourteen days she had no sensation in the right arm, being unable to feel pins stuck into it. The child, as shown, could walk perfectly and use the left arm perfectly. The right arm was affected as stated; there was no loss of sensation in it. Both knee-jerks were absent. Another point in the history was, that the day after birth the right arm was noticed to be very much thinner than the left. Until the present illness, however, the child was able to use it perfectly well in feeding herself, etc. Although the condition of the throat was obviously not diphtheria, and although the paralysis followed the throat remarkably quickly, the conclusion reached was that the case was one of neuritis, following the affection of the throat, and damaging particularly a limb which had previously shown evidence of bad nutrition from some cause operating before birth. The loss of sensation and the continued absence of knee-jerks especially led to this diagnosis.

A Case of Cystic Disease of the Breast in a Boy Aged Three.

The patient was admitted to the Victoria Hospital for Children, Chelsea, under the care of Mr. D'Arcy Power, F.R.C.S. According to the account given by the mother enlargement began eighteen months ago. No pain at any time and no discharge from the nipple. On examination there was felt in the left breast a soft round tumor about the size of half a tangerine orange. It appeared to be cystic in character and adherent to the skin. The nipple was normal, and there was no "dimpling" over the tumor. No edge could be made out, and there were no enlarged glands in the axilla; no tenderness on palpation. The entire gland was excised together with the fascia over the pectoral muscle.

Mr. Powers considered the case unusually interesting because of the rarity of cystic disease in so young a boy.—*British Med. Jour.*, April 29th, 1899.

Correspondence.

OPHTHALMOLOGICAL WORK IN BIRMINGHAM— THE TREATMENT OF SQUINT.

Editors PRACTITIONER AND REVIEW :

To any medical man a visit to Birmingham would be interesting, for it is a great medical centre, and in the magnificent buildings and equipment of the General Hospital the city may take a justifiable pride. But any one interested in ophthalmology will be specially pleased to see the work being done by Owen, Priestley and Smith. As being of general interest I may refer to the work being done in connection with strabismus. Priestley Smith selected this as the subject of the Bowman lecture which he gave last year in London. He spoke then of what had been accomplished by Javal, of Paris, and gave his own experience, which has been large, especially among children.

Children are brought to him not only from the Midlands District, but from many parts of England. His usual practice is as follows: On the first visit the eyes are examined, the angle taken, and atropine drops ordered. The second visit (which may be the following day, but is usually the third or fourth), the vision and refraction are taken, and glasses ordered, if needed. Then the directions for educating the squinting eye are given, and the child sent home. If no operation is needed, he only needs to return at long intervals usually.

The earlier a squint can be put under treatment after its appearance the better the chance of complete cure. This fact the people are beginning to recognize, and, as a consequence, very young children are brought to this clinic for treatment. In regard to results these are, so far as children are concerned, excellent on the whole. In a considerable number of cases false fixation has been replaced by true—the eyes becoming straight. In adults the results are not so good, but even here some cases are seen showing in a remarkable manner what systematic and intelligent treatment will accomplish.

J. T. DUNCAN.

BIRMINGHAM, May 12th, 1899.

Book Reviews.

The Practice of Obstetrics. By American Authors. Edited by CHARLES JEWETT, M.D., Professor of Obstetrics and Diseases of Children in the Long Island College Hospital, New York. New York and Philadelphia: Lea Brothers & Co. 1899.

The work is taken up in eight sections, the first of these dealing with Pelvic Anatomy. Not much is added to our knowledge of the pelvic fascia in it. The author gives some original and very interesting views on the insertion and function of the levator ani muscle, and it is regrettable that the two figures (12 and 13) which illustrate them do not elucidate them very well.

Part II., on the Physiology of Pregnancy, is very good. Chapter IV., on the Diagnosis of Pregnancy, especially so.

Part III. takes us over the Physiology of Pregnancy. The usual statement is made that the "head is born by extension." We think with Dr. Porter Mathew and others that this statement should be qualified. The head does not become extended till its greatest diameter has passed the vulvar outlet. In forceps cases especially it is important to remember this, as premature extension will often rupture the perineum.

We are glad to notice the stress laid on abdominal palpation and auscultation as a means of diagnosing presentation and position. This section is particularly good. In regard to obstetric antisepsis we think it more desirable to lay down definitely one good method than to quote three or four without special emphasis on any. The section on the Management of the First Stage of Labor is excellent, though we think that more might have been said on the relief of pain. In the "perineal stage" we should say emphatically, that one hand should *not* be placed "on the part of the pelvic floor which overlies the head." The plan of waiting half an hour for the placenta and then resorting to the "Credé" method, as advocated in this section by Charles Jewett, we do not think as good as the one recommended in the section on puerperal infection by Whitridge Williams, which is the Rotunda method. Compresses should *not* be used under the binder.

Part IV., on the Physiology of the Puerperium. The subject is well treated, and the matter well arranged.

In Part V., on the Pathology of Pregnancy we think that altogether too much space is devoted to the subject of Monsters. The eight full plates which are introduced here might have been omitted without lessening the utility of the work, and with great saving in the cost of production. Apart from this, Part V. is excellent.

In Part VI. the matter and arrangement of the first two chapters, on Anomalies of the Mechanism, is very good.

With regard to the treatment of eclampsia we find ourselves at issue with Dr. Clifton Edgar on some points. At the Burnside Lying-in-Hospital in Toronto, under care of Dr. A. H. Wright, morphine has been freely used for the control of eclamptic convulsions, without any of the ill effects which have occurred in Dr. Edgar's experience. In the same institution the removal of small quantities of blood has, in *certain* cases, and the administration of saline solutions per rectum in *all* cases proved to be of undoubted value. With glonoin and veratrum viride we have had no experience. We heartily endorse his rejection of pilocarpine in the presence of eclamptic convulsions.

In Part VII., the Pathology of the Puerperium, the important subject of Puerperal Infection comes up. As was to be expected, the bacteriology of this question has been most ably dealt with by Whitridge Williams. We cannot, however, agree with him in his description of the symptoms. "In cases of septic endometritis everything goes smoothly for the first three or four days of the puerperium, when our patient, who thus far has done perfectly well, suddenly experiences more or less malaise," etc. It was pointed out by Professor A. H. Wright, in a paper read before the Toronto Medical Society this winter, that puerperal fever *never* sets in in a patient who has done perfectly well up to the third or fourth day. There are always prodromata, of which the principal are, rapid pulse, headache, sleeplessness and bad taste. Dr. Porter Mathew, in an examination of the clinical records of 12,000 cases of puerperal fever, did not find a single instance in which the puerperium had been perfectly normal up to the time of onset of the chill and fever. In treatment he advocates digital exploration of the uterus, which we endorse, but omits any reference to the benefits to be derived from saline catharsis, which has given such good results in the hands of Professor A. H. Wright and those who have followed his teaching.

With Part VIII., on Obstetric Surgery, we are, in the main, in accord. We cannot, however, agree with the author when he writes that "external version is indicated in cases where a breach presentation is diagnosticated during pregnancy." Manual rotation, in occipito-posterior cases, has been more successful in his hands than in ours. Throughout the whole book we admire the arrangement of the matter, which makes it easy to grasp the salient points. We consider it one of the best that has appeared for some time. Messrs. Lea Brothers & Co. are to be congratulated on the mechanical part of the production, which is almost faultless.

International Clinics. A quarterly of clinical lectures on medicine, neurology, surgery, gynecology, obstetrics, ophthalmology, laryngology, pharyngology, rhinology, otology, and dermatology, and specially prepared articles on treatment and drugs. By professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain, and Canada. Edited by Judson Daland, M.D. (Univ. of Penn.), Philadelphia, Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania. J. Mitchell Bruce, M.D., F.R.C.P., London, England, Physician to and Lecturer on the Principles and Practice of Medicine in the Charing Cross Hospital. David W. Finlay, M.D., F.R.C.P., Aberdeen, Scotland, Professor of Practice of Medicine in the University of Aberdeen. Eighth series 1898. Volume iv. Philadelphia: J. B. Lippincott Company. Montreal: C. A. Roberts, general agent for Canada. Toronto: A. P. Watts & Co., 10 College St.

The concluding volume of the 8th series maintains fully the reputation of the clinics. The editors take great pains to supply articles on subjects of the greatest usefulness to the general practitioner. While the ailments of less common occurrence are plentifully exploited, those more commonly met with have the preference. The opening clinic of the present volume is by Dr. Geo. C. Laws, on Glonoinism. It is a most interesting treatise on the nitroglycerin poisoning to which workers in this material are subject. Tracings of the pulse after years of following the trade are presented with short histories of the cases. Professor A. Fournier, of Paris, presents the treatment of the "syphilitic chancre." He does not condemn the excision of the chancre but remarks that the only reason for not doing so is the respect due to certain physicians who have published cases in which they claim to have succeeded in aborting the disease. We do not agree however, with the foregoing. The wound made in aseptically excising the chancre is insignificant, and we have most usually had union by first intention. However, the question is a most unsettled one and open to fair discussion. The advice of not to do too much is most excellent and "spare the patient from the use of iodoform" most appropriate, for reasons that are plain.

Dr. Joseph M. Machien, of Louisville, in speaking of the treatment of ulceration of the rectum and ulceration of the colon says that all ulcerations of the rectum are either common, syphilitic, or tuberculous. This is a point well taken and with Dr. Machien's twenty years of experience should be well considered.

All the clinics are of an unusually high order.

Nervous and Mental Diseases. By ARCHIBALD CHURCH, M.D., Prof. of Clinical Neurology and of Mental Diseases and Medical Jurisprudence in the North-western University, Chicago, etc., etc.; and FREDERICK PETERSON, M.D., Clinical Professor of Mental Diseases in Woman's Medical College, New York; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York. With 305 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899. Toronto: J. A. Carveth, & Co. Price, cloth, \$5.00; half morocco, \$6.00.

We have here a large octavo volume of 843 pages. This work is gotten up in the elegant style so characteristic of all of W. B. Saunders' publications. The paper, type, illustrations and binding are everything that could be desired.

This covers the entire field of nervous and mental diseases. In this regard it possesses a distinct advantage over many able works that treat of only sections of the work, such as organic or functional diseases of the nervous system, or diseases of the mind. Dr. Church takes the former, and Dr. Peterson the latter portions of the work.

From the reputation of these two authors, one turns to this work with high expectations. It must be admitted at once that, with rapid change of opinion and advance in knowledge that is taking place along the whole line of neurology and alienism, it is not an easy task to produce a book that will be found to be well up-to-date and accurate on all points. It must be said that a careful perusal of this work makes it clear that the authors have left nothing undone to fulfil these two requirements. Lengthy discussions on debatable subjects are carefully avoided. One of the leading features of the work is its directness and definiteness of statement.

The care with which the illustrations have been selected deserves more than a mere passing word. It rarely falls to the lot of the reviewer to speak with so much pleasure of this feature of medical works as in the present case. To take as an instance, fig 19 expresses in a glance what it would take pages to explain. The numerous illustrations giving the attitude and gait of many nervous diseases are very important. This feature of the study of nervous diseases has been far too much ignored in many of our best works. In the section devoted to mental diseases, the illustrations are very typical and helpful.

If anyone wishes to read a masterly description of any extremely difficult question, we would commend to him the article on "Paranoia." One statement at once attracts the attention, where the writer states that the prognosis is absolutely unfavorable. It is not often that we meet with such clear cut

opinions; and yet, when you look at the evolution of progressive systematized insanity, how could it be otherwise than hopeless? Nevertheless, some authors speak of recoveries!

This work should meet with a favorable reception. It possesses the elements requisite to make its way into the confidence of medical readers—lucidity of style, accuracy of statement, and fulness in the treatment of the whole field of neurology.

DUFFERIN UNION MEDICAL ASSOCIATION.

The second quarterly meeting of the Dufferin Union Medical Association was held at Orangeville on Tuesday, May 9th, and was interesting and well attended. The general discussion was principally occupied by the subject of Appendicitis. The next meeting, which was constituted the annual one, will be held at Grand Valley, on the second Tuesday in August, 1899, when a morning and afternoon session will take place.

The following resolutions were passed:

Moved by Dr. Smith, Orangeville, seconded by Dr. Hopkins, Grand Valley, that this Society considers that the time has arrived when the medical profession should receive justice at the hands of the municipalities whose sick and injured indigents call for medical and surgical aid; that the repeated repudiation of just claims for such attendance, even in cases of contagious and infectious diseases, is a disgraceful and dishonorable evasion of duty by township, village and town authorities; that, in order to have this abuse corrected, the matter be brought before the Medical Council by our representatives, and that in the meantime other county and district societies be requested to take such concerted action as may lead to a proper recognition of our rights. Carried.

Moved by Dr. Lewis, seconded by Dr. J. Henry, that it is desirable that interprovincial registration be secured, if the curriculum in all the provinces be made equal to that now obtaining in the Province of Ontario. Carried.

In regard to the use of atropine, for a long time it has been my custom to give a hypodermic injection of atropine and morphine, $\frac{1}{8}$ - $\frac{1}{4}$ grain of the latter and $\frac{1}{16}$ grain of the former, half an hour before operation. Of course it is impossible to say that it has prevented pneumonia, but it certainly has done good. The patient takes the anesthetic (ether) better, and there is less mucus in the throat.—GRANT BALDWIN.

INTRACEREBRAL INJECTION OF ANTITOXIN IN TETANUS.

Dr. D. Semple, Assistant Professor of Pathology, Army Medical School, Netley, in an article published in the *British Medical Journal* of January 7th, 1899, refers to the following facts, the result of a series of experiments on animals, by Roux and Borrel, and verified by himself at Netley, and at the Pasteur Institute at Paris:

1. Tetanus is caused by the absorption of a toxin elaborated by the tetanus bacillus at the site of inoculation. Here the bacilli multiply, and produce a very strong toxin, which, after absorption, is taken up by the cells of the central nervous system, is fixed there, and gives rise to the characteristic spasms.

2. Hypodermic injection of the toxin into susceptible animals will cause the disease, though bacilli are not present.

3. The toxin reaches the central nervous system by two paths, one part, directly by the nerves, causing spasms near the seat of injury at an early date. The other part passes to the central nervous system by means of the blood stream, being fixed in the nerve cells. This fixation takes place earlier in the spinal cord than in the higher nerve centres.

4. If tetanus antitoxin be injected hypodermically into a healthy animal, it acquires passive immunity, and can resist subcutaneous or intravenous injection of large doses of tetanus toxin. However, the animal is not immune to a small dose of tetanus toxin injected into the brain substance, but on the contrary it readily develops cerebral tetanus, and dies.

5. An animal suffering from fully developed tetanus cannot be cured by hypodermic injection of tetanus antitoxin. The toxin has already been taken up by the cells of the central nervous system, and these cells do not take up the antitoxin from the blood, and are not influenced by it. In this case the toxin may invade new areas under the false protection of the antidote, nerve cell after nerve cell being involved. On the other hand, animals in the early stage of tetanus can be readily cured by intracerebral injection of a small amount of antitoxin.

Conclusions.—If tetanus is suspected, but symptoms have not appeared, subcutaneous or intravenous injection of antitoxin confers passive immunity, and is a certain preventative. If symptoms have appeared, this is not sufficient to cure or prevent the spread of the disease, for the central nervous elements have not the same affinity for the antitoxin as they have for the toxin. For this reason the antitoxin does not reach the affected nerve cells in the lower centres, and the higher nerve centres, which have not as yet taken up the toxin, are not

immunized, therefore the disease progresses. The only way to confer immunity on the higher nerve centres is to inject the antitoxin into the substance of the brain.

Chauffard and Quenin, of Paris, were the first to adopt Roux and Borrel's method of intracerebral injection of tetanus antitoxin in a case of tetanus in man, in April, 1898. The case recovered. Over twenty cases have been treated in this way in and near Paris since that time, with encouraging results. Dr. Semple does not state how many recovered.

In Dr. Semple's case, on November 16th, the patient developed symptoms of tetanus. The masseter muscles and the muscles of the neck were contracted, and those of the abdomen slightly so. On the 17th spasm of the jaw muscles was marked, and there were also spasms of the muscles of the legs and arms. On the 17th at 9 p.m., $2\frac{1}{2}$ c.cm. of doubly strong antitetanic serum were injected into each frontal lobe of the brain, and 20 c.cm. of antitoxin were injected by hypodermic into the flank. On the 18th the condition was unchanged, and 20 c.cm. were given hypodermically; on the 19th the condition was about the same, and 20 c.cm. were given hypodermically; on the 20th the spasms were less marked; on the 21st there was more improvement; on the 22nd he could open his mouth without causing spasm; on the 23rd the muscles of the jaw and neck were free from spasm, but there were twitchings when he heard a noise; on the 30th he was able to be out of bed, but had slight spasm of the arms on exertion. He was weak and anemic. He had no brain symptoms, ate and slept well. The temperature was practically normal throughout, and pulse and respiration regular.

The intracerebral injection immunizes the higher nerve centres before the toxin has become fixed in the nerve cells. Twenty c.cm. are given hypodermically for two, three or four days, according to circumstances, and have the effect of rendering the blood antitoxic. The toxin, therefore, as it becomes absorbed from the source of supply, is neutralized as soon as it reaches the blood stream.

Description of the Operation.—The hair is cut, the anterior part of the scalp shaved and the skin made aseptic. The patient is anesthetized. An imaginary line is drawn from one auditory meatus to the other; another line from the base of the nose intersects this at right angles, and a third from the outer angle of the orbit to the point where the first two lines intersect. The middle point of this last line is chosen as the site of operation. An incision from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch is made down to the bone. A small hole is drilled with an Archimedean drill, with a movable collar, so as to regulate the depth to which it

penetrates. A special syringe, with a screw piston and a needle with a rounded point and about two inches in length, containing $2\frac{1}{2}$ c.cm. of double strength antitoxin, is inserted through the hole and straight into the brain substance as far as it will go. The piston is screwed down very slowly, so that the fluid enters the brain substance drop by drop, to avoid breaking up any brain tissue. About ten minutes is required for the injection. The needle is withdrawn slowly, the edges of the wound drawn together by two or three stitches, and sealed with collodion and cotton wool. The same operation is repeated on the other side.

[The needle with a rounded end would not transfix a vessel; a sharp-pointed one might.]

HEPATIC INSUFFICIENCY.

M. G. Carrière, Professor in the Medical Faculty of Lille discusses at length the above subject in the *Gazette des Hopitaux* for January 7th, 1899. He states that the functions of the liver are the formation of urea, sugar, bile, the arrest of poisons, the arrest of microbes, a blood-making power, and an unknown function in the form of an internal secretion.

Hepatic insufficiency may follow two different modes. It is quite certain that the diseased hepatic cells lose their functions wholly or in part, as in atrophic cirrhosis. In the second place the work imposed upon the hepatic cells may be greater than their powers. In this case there is a relative insufficiency, as when there is more sugar taken than the liver cells can fix, there results a glycosuria.

Clinically, one can recognize three forms of hepatic insufficiency: (1) Latent hepatic insufficiency; (2) Minor hepatic insufficiency, or minor hepatism; (3) Grand hepatic insufficiency.

1. In a great number of cases of latent hepatic insufficiency the person is not in the least degree aware of its existence. It is only on the occasion of some passing intoxication, as a medicine or alcohol, or on the occasion of some infection that the disturbance becomes manifest. It is only by a thorough study of the urine that we can find out these derangements of the liver in its ureagenic, biligenic, glycogenic, and poison-arresting functions. In this way these latent insufficiencies can readily be revealed, as has been so well shown by Hanot.

2. The minor hepatic insufficiencies often reveal themselves to thorough interrogation, especially by an assemblage of little signs. Comparing these signs to those of Bright's disease, we may speak of them as the little signs of hepatic insufficiency. There is an anorexia, sometimes complete, sometimes only

The Canadian Practitioner and Review.

VOL. XXIV.

TORONTO, JULY, 1899.

NO. 7.

Original Communications.

HYOSCINE.*

BY J. T. FOTHERINGHAM, M.A., M.D., TORONTO.

This drug, as is well known, is one of the alkaloids of *Hyoscyamus Niger*, Henbane, nat. ord. *Atropaceae*, occurring in both leaf and seed. It is amorphous or crystalline, and is isomeric with hyoscyamine, its sister alkaloid, with atropine, and with duboisine. The formula, $C_{17}H_{21}NO_4$, is also identical with that of scopolamine, a very powerful alkaloid obtained from various kinds of *Scopolia*, nat. ord. *Solanaceae*, a family of which capsicum and bittersweet are familiar members. The whole of these isomers belong to what is known as the tropeine series of alkaloids, are difficult of differentiation chemically, and are well known as powerful, depressant poisons, exhibiting, all of them in varying degree, the chain of symptoms with which as students we were made academically, if not clinically, familiar by the formula of the "four D's"—Dryness, Dilatation, Dizziness and Delirium. They constitute, however, a beautiful example of the fact that drugs, however apparently exactly identical, do clinically display distinct divergence of action, as we shall see of hyoscine if we recollect, without taking time to mention them, the physiological effects of, say, atropine. Scopolamine, for instance, is used as a mydriatic, and is most rapid in its action if instilled into the eye in amounts of one minim of one-tenth of one per cent. solution. A solution stronger than two-tenths is very apt to cause poisoning. The rapidity of its action causes the eye specialist to use it when prompt and rapid effect is desired, as in early

* Read before the meeting of the Trinity Medical Alumni Association, May 31st, 1899.

stages of, say, plastic iritis, or to tear down posterior synechiæ, but where more prolonged and gradual effect is desired atropine is preferred. This clinical difference of effect of drugs otherwise indistinguishable no human ingenuity is likely ever to be able to explain. Let us leave the facts and the problem to the scientific acumen of the un-Christian Anti-Scientists who revel in the maunderings of Mary Baker Eddy, C.S.D.

The first important communication on the subject of hyoscine was made to the German Chemical Society, in 1880, by Professor Ladenburg.

Hyoscine is not used, the writer thinks, so frequently as its merits, in properly selected cases, would justify. The salt commonly employed is the hydrobromide in doses usually of $\frac{1}{100}$ grain. The profession at large are aware that it is used in the asylums for the insane, in maniacal cases, but are not aware of the valuable service it can render in general practice. The writer has, within the past five months, used it with marked benefit in several cases widely differing in character, and has been impressed with its good results.

CASE 1 was one of acute senile decay in an old lady of upwards of eighty years, who had been in excellent health till severely shocked by the violence of a relative who had appeared in an intoxicated condition and made noisy and threatening demands for money. She fell rapidly into a state in which death seemed imminent, very slow and irregular pulse, dry, brown tongue, obstinate wakefulness and night-terror, long fits of screaming, with almost total suspension of assimilation and excretion. Hyoscine hydrobromide $\frac{1}{100}$ gr. by mouth in the evening, repeated in two hours when necessary, with another $\frac{1}{100}$ gr. in the morning, controlled this cortical activity excellently and promptly whenever given, and in two weeks or so, with nux vomica, and proper attention to feeding and excretion, with the occasional use of a mixture containing digitalis, nitroglycerine, and ammonium bromide, she made an excellent recovery.

CASE 2.—A. B., female, aged 67, after successfully rounding the corner from severe lobar pneumonia, developed meningitis. The delirium of this condition, whether violent and noisy, or low and muttering with plucking at the bedclothes and incontinence of bladder and bowel, was most favorably influenced by $\frac{1}{100}$ gr., repeated if needed in two hours. The main danger, cardiac depression, which one might have feared in each of these cases, was not apparent at all. Indeed, in the second case the heart, which had behaved abominably before the crisis of the pneumonia occurred, behaved admirably during the meningitis, in spite of the hyoscine.

CASE 3 was one of mild hysteria in a young married

woman. Every evening about bedtime a restlessness would come on, preventing sleep, purely emotional, not intellectual nor volitional, with no apparent cause. Nutrition and elimination were normal, but there was a general lack of initiative and of nervous energy, nervous debility showing itself as usual by nervous irritability. Hyoscine $\frac{1}{100}$ gr. acted excellently here again, not as an active hypnotic, but allowing sleep by checking cortical activity. This good effect was in this case somewhat transient, disappearing in a few days.

CASE 4, seen in consultation with Dr. C. R. Sneath, was one of very severe hysteria in a girl of about eighteen. The outlying symptoms noted in my casebook, apart from some very peculiar motor and sensory disturbance, with which I shall not trouble you, were as follows: "Ideation—disordered, *bizarre*, hysterical, very introspective and emotional, but not delusional, though very nearly so." Hysterical photophobia, aphonia and paresthesia were exceedingly well marked, and all the reflexes, both deep and superficial, were greatly exaggerated. Dr. Sneath has kindly reported the effect of the hyoscine which I recommended, as follows: "*Pulse*—at first quickened, then slowed and force lessened. After three days' administration of $\frac{1}{100}$ gr., night and morning, the pulse fell, ranging from 56 to 60, and became very soft and irregular. On omitting one daily dose the pulse regained its former action. *Nervous system*—the drug induced quiet sleep, dispelled the very vivid day-dreams, and quieted the tendency to start violently and scream at the least unexpected noise; the photophobia soon disappeared almost entirely (just the opposite effect to that to be expected if one considers merely the enlargement of the pupil and the admission of more light); the muscular twitching still remains in a slight degree, and the patellar reflex is less exaggerated."

CASE 5, seen in consultation with Dr. Adam H. Wright, was one of acute rheumatic exacerbation of an endocarditis long previously existing in a youth of twenty or thereabouts. The heart was excessively hypertrophied, and the sleeplessness and mild delirium which accompanied the circulatory disturbance in the brain were very distressing. Morphine was tried with fair effect, especially when pushed to $\frac{3}{4}$ gr. or 1 gr. each night. Every one knows the reputation of morphine as a steadier of the heart and as a hypnotic in such cases, but on this occasion the addition of the hyoscine is reported to me as having produced a decided improvement on the action of the morphine, better sleep, and less delirium than had been the case during the nights when the morphine alone had been used. The dose was pushed to $\frac{3}{100}$ gr. during the night, with no depressing effect on the heart. Indeed a hypertrophied heart,

such as the one in question, is often the better of depression, provided it be not secured at the expense of the cardiac centre mainly.

Cases even so divergent as these do not indicate the whole range of usefulness of the drug. Hare says that it is "certainly of great value in spermatorrhea and nocturnal emissions." Also that it acts mainly on the cerebrum (he might have said the cortical areas), and that "it is of value as a hypnotic only in a very limited class of cases, but in this class generally acts most favorably." These are cases of insomnia due to acute mania, delirium tremens, hysteria, or similar cause—one might say, perhaps, cases in which there is functional over-activity of the higher centres without undue depression of the vegetative centres; for experience in insane asylums has shown it to be injurious to melancholics, and in general paresis, chronic mania, epilepsy, and dementia it is no better than chloral, but is apt by constant use, at least in some cases, to increase excitement. Peterson (*N. Y. Med. Jour.*, October 11th, 1890) found it very efficacious in controlling the tremor of paralysis agitans.

Objections to the drug are, first, the uncertainty of its action, a peculiarity common to all drugs, the brunt of whose influence falls upon the nervous system. Idiosyncrasy may cause alarming cardiac, respiratory, or spinal depression. Like all drugs from the Atropaceæ, it dilates the pupil, dries up the throat, and if pushed may cause dizziness, delirium, and an erythema of the skin. Some authorities have insisted that it must be given by hypodermic injection, but the writer has seldom so used it, and has been amply satisfied with its action given by the mouth. It may cause croupy breathing, probably from laryngeal dryness, and, in spite of the benefit evident in the case of insomnia from cardiac disease detailed above, it is usually considered less safe than morphia in such cases. Hare says that "the applicability of the drug is very limited indeed, and untoward effects are common." Without pitting a limited experience against Hare's dictum, it seems to the writer that that dictum is too strong, and that the drug is deserving of more frequent use, particularly in meningitis and conditions of cortical over-activity, so long as we bear in mind that its untoward effects are to be found chiefly in the three directions of the cerebration, the circulation, and the respiration.

SURGICAL GYNECOLOGY AMONG THE INSANE: RIGHT OR WRONG?

BY A. T. HOBBS, M.D.,

Asylum for the Insane, London, Ont.

Some four years ago the medical staff of the Asylum for the Insane, at London, Ontario, were impressed with the idea that among the women congregated in that institution there must exist many cases of hitherto unsuspected pelvic disease. The only reliable method to ascertain the correctness of this impression was by actual examination of the most likely cases. After close scrutiny of the history of many of the women a number were selected and underwent a thorough examination while under the influence of an anesthetic.

The numerous pathological lesions diagnosed by this mode of investigation surprised us, and the good results following appropriate treatment of these diseases exceeded our most sanguine expectations.

The presentation of this surgical work and its sequences, before various medical societies, has aroused bitter opposition from a section of the profession devoted to the care of the insane. The motives of the investigators have been impugned, and the object of the surgical work has been so persistently misrepresented that an erroneous conception of the whole subject has gained credence, to some extent, among a number of our Canadian physicians. The purpose of this essay is to place the pros and cons of the subject before the profession at large, the proper judges to decide as to whether we are right or wrong in the course we have been pursuing.

Among the objections made to the work are these: "*Wholesale mutilation of helpless lunatics,*" "*Criminal to impose such a risk upon an irresponsible being,*" "*It is high time for the profession to call a halt in its mad career of pelvic mutilation.*" We are characterized as "*Meddlesome gynecologists,*" "*Wages his most relentless surgical fury on the ovaries,*" "*Never fails in his diagnosis for he always finds what he searches for,*" "*Statistics published prior to a two years' test of their efficiency are comparatively worthless,*" "*There is no room for such a fad,*" "*We have no gynecologists connected with this hospital; if we had we would certainly have more cases of disease of the female genitals,*" "*Do not know of any case of insanity due to disease of the genital organs,*" "*The mania for removing ovaries is a crying evil.*"

These objections have been directed at the gynecological surgery done among the insane at the London and other asylums. Such criticisms are illogical, because they are foreign to the subject; unfair, because they misrepresent what has

been done; untruthful, because they charge us with doing things that we have not done. They impugn the motives of those engaged in the work and question the results obtained by them. The critics freely admit, on the one hand, that the work should be done, and the next moment they denounce us for having the timidity to do it. They institute an inquiry on purely speculative ideas and receive shoals of negative opinions. When I say negative, I mean the endorsement of their standpoint from those having little or no experience of the subject. What estimated value can be placed upon negative opinions when weighed against positive statements: the finished product of actual experience? We deny the right of any one to pose upon theoretical grounds alone as a critic of gynecology among the insane. As all the objectors have arrogated to themselves the position of judges on this subject, it is only fair to ask them to produce the premises upon which they have qualified themselves to act as arbiters of the treatment of gynecic disease among the insane.

What have our critics done to qualify themselves to sit in judgment upon us? What patients, and how many, have they examined for pelvic disease? What gynecologists have they called in in consultation? What have they found? Do they expect us or the profession at large to be guided by their mere opinion resting on nothing, as against the evidence of our actual investigation?

In spite of the continued publication of the restoration to health of many cases resulting from the removal of physical disease through the agency of gynecological surgery, the critics persist in ignoring the facts and reiterating the absurd cry that "we operate for insanity." Unprejudiced observers, upon perusal of the cases as given below, will at once admit the fallacy of this assertion. The text of our work has always been that "*these operations are done primarily and specifically for the removal of physical diseases and the promotion of bodily comfort.*" Why do these critics persist in repeating this old, baseless plaint "that we operate for insanity"? Why will they not point to even one case in which an operation was done for, or because of, the mental condition? They cannot prevent the profession from obtaining the true status of the work.

"That we look for disease and find it" is the sarcastic comment advanced by one critic as to the manner of our gynecological diagnosis. This criticism is made without the slightest knowledge of the facts, and casts doubt upon the conjoint opinion of at least two or more medical men. No operation is done in the London Asylum unless my diagnosis of the disease is agreed to by our skilled consulting gynecologist, Dr. Meek.

The confirmation of the diagnosis by actual demonstration, at the time of operation, is also witnessed by our Superintendent, Dr. Bucke, and other medical men (often including the patient's family physician), and should be sufficient proof as to the genuineness of the presence of disease.

But this criticism, though heedlessly and wantonly made, sinks into comparative insignificance compared with the deliberate and outrageous charge that in the performance of these operations we are guilty of "wholesale mutilation of helpless lunatics." This rash accusation, emanating from no less an authority than a prominent Canadian alienist, is too serious to dismiss lightly. It passes the boundary of legitimate criticism. Only one interpretation can be placed on it, and that is, that in carrying on our surgical gynecology we are criminally maltreating our patients. To this charge there can be but one answer: "We are right in doing this class of surgery or we are wrong." If we are doing those things we ought not to do, the sooner we know it the better. We must stop or be suppressed. If we are right in making pelvic examinations in insane women and surgically removing gross disease, when it is conclusively demonstrated, then the position so autocratically adopted by our critics is unenviable. It places them before the profession in the light of non-progressionists. It publishes the fact that they are unable to appreciate a valuable method for the betterment of the health of their charges and the opening of a possible avenue for their future mental recovery. More serious still, it exposes a deliberate attempt to strangle a scientific advance upon the obsolete methods still so largely in vogue in many asylums of to-day.

We appeal to the broad-minded profession at large, whose consultants we are, as to whether we are right or wrong in this matter. We ask: Is it wrong to curette a uterus for endometritis or sub-involution? Is it detrimental to the health of a patient to repair a lacerated cervix or amputate a diseased one? Is it mutilation to extirpate tumors malignant and benign? Is it criminal to surgically unsex an insane woman when the unsexing is already done by the disease which we operate to cure? Is it unscientific to replace a dislocated or prolapsed uterus, and is it illogical to restore a torn perineum? That we are guilty of doing these things we do not deny. If this is to be termed mutilation of helpless lunatics, then the sooner gynecology becomes an extinct art the better. But if these operations are legitimate and proper when done by surgeons universally upon sane women, then why are they stigmatized as "mutilation" when done upon their insane sisters for precisely similar diseased conditions?

I state positively that each operation performed in the London Asylum was undoubtedly indicated by the disease present, irrespective of the insanity complication. Knowing that these diseases are not infrequent among these people, as will be shown, would it not be a grave dereliction of duty to deny to those unfortunates the benefits of decent surgical treatment? Would it not be degrading to our manhood and lowering to our professional self-esteem to leave undone those things that we ought to have done? It would be plain neglect of duty. The ridiculous sentimental cry of "mutilation" should not prevent true surgeons from doing their whole duty towards their patients.

Let not some alienists forget that they are living in modern times, and that every branch of scientific art is advancing. It will not suffice to hold up their hands and deplore the increase of insanity and the overcrowding of our asylums. The world will demand of them an account of what they are doing to increase efficiency in their methods of treatment and increase their ratio of recoveries. The percentages of fifty years ago will not satisfy the profession of to-day. Some evidence of practical improvement all along the line of treatment will be demanded of those who have care of the insane. Mediæval methods must give way to better and more rational therapeutics. Close incarceration and restraint must be relegated to the past. Massage, stomachic investigation, serum therapeutics, and scientific surgery will, in spite of the Rip Van Winkles, supersede ancient and crude modes of treatment. The axiom that there is no remedy for the cure of insanity other than through the prior restoration to bodily health of the deranged individual, will universally be assured by alienists. Let, then, our critics memorize a living principle, "*Mens sana in corpore sano.*"

Subjective symptoms, as portrayed by the sane, indicative of internal disorders, are, as a rule, absent in the insane when afflicted with similar derangements. Their delusions, illusions and hallucinations, their restlessness and excitability, and their moroseness and secretiveness subvert ordinary physical sensations. Interrogation of the various bodily functions is, for the same reason, valueless. The suppression of subjective symptomatology among the insane is no proof of the absence of physical disease. Demonstration by practical investigation is the only reliable method to determine the presence or absence of disease in an insane person's system. Injuries to the skull, pneumonic lesions, cardiac murmurs, derangement of the alimentary tract, changes in renal secretion and diseases of the pelvic organs can only be discovered by actual examination. When any of these physical lesions are located in an insane

patient no one questions the importance of remedial treatment. Our critics adopt the peculiar attitude of commending the empirical drugging and applauding the experimental dosing of those poor helpless lunatics with nauseating extracts, attenuated toxins and doubtful serums in the hope of curing them of their bodily ailments and through it procuring their restoration to sanity. But if these remedies utterly fail in removing pathological lesions and surgery steps in and succeeds, these critics raise their voices and loudly denounce in unmeasured terms the presumption of the psychogynecologist who cures mental disease by way of the pelvic cavity. Their position is certainly the essence of "*reductio ad absurdum*."

It is regrettable that the majority of the alienists lack training in surgery, especially gynecology, because where so many women are congregated together as there are in asylums there must be a large number of cases of unsuspected, therefore untreated, pelvic disease. Furthermore, it is to be deplored that asylum authorities fail to recognize this important fact and provide ways and means for its abatement, the fact, namely, that there are probably immense numbers of insane women in the asylums of Canada and the United States to-day needlessly confined, who would be restored to their homes and families through the adoption of this line of investigation and treatment alone. As it is, this section of these unfortunate exiles, unable by mental disability to make known their ailments, are doomed to suffer untold misery as long as existence endures.

THE WORK THAT IS CRITICISED.

We have, up to date, examined 187 selected insane women at London Asylum to ascertain the existence or otherwise of disease of the pelvic organs. In 163 women there were diagnosed distinct pathological lesions and abnormalities. Furthermore, it was necessary, in our opinion, on physical grounds alone, to remedy or remove such disease by appropriate surgical treatment in 155 of these patients.

Without entering into detail of the many lesions diagnosed and removed in these 155 women, a general presentation of the gynecological work done will give an idea of the importance of the treatment carried out.

Tumors, malignant or benign, and other serious lesions involving the pelvic organs necessitated the performance of 22 hysterectomies, 12 of which were abdominal and 10 vaginal. Three deaths followed these operations—one from exhaustion on the third day, the second from accidental hemorrhage (brought about by patient) on the seventeenth day, and the third from septic pneumonia on the seventh day succeeding the

operation. The latter case was *in extremis* at time of operation, there being pus invasion of every organ of the pelvic cavity.

Ovarian diseases, including tubal, dermoid cysts and hematomata were the lesions removed in 21 cases, one of which died of pneumonia on the twelfth day.

In two cases of tubercular peritonitis the abdominal cavity was opened and flushed with warm salt solutions.

Dislocated and retro-displaced uteri were corrected and replaced by 42 Alexander operations and ventro-suspensions.

Injured and diseased uterine cervixes received appropriate surgical treatment in 48 women so affected.

In 31 cases, chronic endometritis, metritis, and subinvolutions of the uterus were attended to.

Lesions of the vagina and perineum, including fistulæ, existed in 22 cases. These lacerations were repaired and the fistulæ closed. It may be stated that many of these patients had two or more lesions needing two or more operations to complete the treatment.

Mental recovery followed the physical restoration to health in 60, or 38½ per cent.; mental improvement in 40, or 26 per cent.; no mental improvement was observed in 51, or 33 per cent.; and 4, or 2½ per cent., died. It may be said that 49 of the 100 women who either recovered or improved mentally, had been insane two years or over prior to surgical treatment. The majority of these patients (many of them were apparently hopeless wrecks in body and mind) have returned to their homes and are enjoying good mental and bodily health; while it is as certain as anything can be that were it not for this surgical treatment many of them would have remained incarcerated for life as helpless, hopeless lunatics.

Before concluding, let me quote from Dr. G. Alder Blumer's report of Utica Asylum for the year 1897. He says: "It is high time that the specialty of mental disease was taken out of the slough of mediæval mystery and put upon a plane with other ailments of the body; high time, too, that physicians of the mind should realize that they are physicians of the body."

ON THE USE OF RUBBER SPLINTS IN THE TREATMENT FOLLOWING INTRA-NASAL OPERATIONS.*

BY J. PRICE-BROWN, TORONTO.

In the August number of the *Journal of Laryngology, Rhinology and Otology*, Richard Lake had a short article on the use of rubber splints in intra-nasal work. I was impressed with his views at the time, as they seemed to supply a much-needed want.

In my own experience covering a period of more than ten years, devoted to special work upon diseases of nose and throat, the evil effects of septal deformity could in the large majority of cases be removed by widening the narrow nasal passage, without resorting to fracturing or straightening the septum itself. Let a clear open chink be made if only wide enough to prevent accumulations of mucus between the turbinateds and the septum, and the catarrhal difficulties caused by the obstruction will, after healing of the mucous membrane, be in a great measure removed.

We rarely find even in examination of healthy individuals that the two nasal passages are approximately alike, the distance between the septum and middle and inferior turbinateds on the right side differing from that on the left in the majority of instances. Still, provided the narrow passage is open, a considerable difference in the lateral dimensions of the two will have little or no injurious effect upon the secretions of the mucous membrane.

Disease, however, arises when from one cause or another the septum touches the turbinated, or when the chink of the inferior meatus becomes so narrow that the mucous secretions accumulate in the passage, thereby inducing post-rhinal catarrh and preventing normal respiration on that side. In dealing with these cases, it is not the operative but the post-operative treatment that I have usually found the most troublesome. By saw or knife, drill or scissors, or curette, single or combined, the projecting spur or ridge might be removed; synechiæ connecting the turbinated with the septum could be excised; or a partial turbinectomy when necessary might be performed; but to procure smooth equable pressure upon the incised tissues during the process of healing has been a much harder matter.

Some years ago a paper of mine on "Silver Tubage in

* Read at the Annual Meeting of the American Laryngological, Rhinological and Otological Society, in Cincinnati, Ohio, June 3rd, 1899.

Certain Cases of Septal Deformity" was read at the Laryngological Section of the American Medical Association in San Francisco, dealing to some extent with this matter. In many cases these silver tubes are useful, but in many others they are inapplicable; and in the latter class in which the chink can only be a narrow one at best, I think that rubber splints, made as Lake advises, from thick rubber sheeting, do better work than anything else we have at our command. Their surfaces are smooth, compressible, and elastic; they can be readily cut to the required shape, and they can be obtained of any thickness we desire.

After cocainizing the parts and coating the plug with vaseline, it can readily be placed in position. Once in, it will not only retain its place, but by elastic pressure, give a smooth and even support to the raw surface to which it is applied, as well as prevent that profuse granulation which otherwise would sometimes occur. At the same time it does not retard the gradual extension of the new mucous membrane, while it moulds the tissues into a smooth and regular form.

The stiff pliable rubber, although not so hard on the surface, nor possessing the polish of the vulcanite, is probably just as impervious to bacterial invasion. Sometimes, however, after prolonged use, it will acquire a peculiar unpleasant odor, in part arising from the rubber itself. In these cases new splints or tampons should be substituted for the old ones. As I have used the rubber plugs in a goodly number of instances, I might briefly quote the following ones from my case book.

CASE 1.—October, 1898. A boy, aged 6, was brought by his mother to the Western Hospital for treatment on account of entire inability to breathe through the right nostril. This had been coming on gradually for several years, occasioned, the mother thought, by a fall on the face when two years old. There was nothing striking about the external shape of the nose. There was, however, a marked curvature of the cartilaginous septum to the right, with a longitudinal ridge at its base. Chloroform being administered, the ridge was excised. Then to lessen the resistance, I cut into the convex surface of curvature of the cartilage from behind forward. In one spot, although guarded by the little finger in the opposite nostril, the knife accidentally penetrated through the septum. Not heeding this, as it would probably unite by first intention, a rubber splint one-eighth of an inch thick, long enough to go beyond the triangular cartilage and as wide as the fossa would admit, was pressed into the nostril. The child was kept under observation, but the plug was not removed for two weeks. It was then found that the perforation had healed and that the nasal passage was patulous. After cleansing, the splint was

replaced and worn for ten days more. The right passage was almost as large as the left, and the patient was discharged cured.

CASE 2.—December, 1898. A gentleman, aged 58, came for treatment for left nasal stenosis and "throat dropping." He stated that thirty years before while at college he went to a surgeon about his nose. The advice he received was that there was a growth in the left nostril, but that it would be a difficult and delicate operation to remove it, and that without it occasioned serious trouble he should leave it alone. He followed the advice given, and it was only during the last few years that it had given much inconvenience. On examination I found a curved septum and a large round cartilaginous spur, filling up the anterior portion of the left nasal cavity. It was pointed, and infringed upon the opposite wall just in front of the anterior end of the inferior turbinated. Behind it the osseous septum was also curved for the greater part of its length towards the left side. With a sharp curved knife I excised the spur deeply, leaving a clean cut surface. As this was followed by profuse hemorrhage, the naris was packed with absorbent cotton. On removing the tampon the following day, I found that the congested walls completely filled the cavity behind the site of operation; so after applying cocaine and thus shrinking the parts, I at once slid in a rubber splint, the end being bevelled to facilitate its entrance. It was made out of sheeting two-eighths of an inch in thickness. Slight irritation existed for a day or two, but this soon passed away. At the end of the week it was removed. By this time congestion was over, the surface was smooth, and it healed without further difficulty, leaving a clear narrow chink.

CASE 3.—February, 1899. A carpenter, aged 23. Had nose broken when a child by a fall, producing partial depression of bridge. For years has had almost complete stenosis on left side, resulting in pharyngeal catarrh and edema of uvula.

Examination.—Right nasal fossa enlarged, presenting concave, hook-notched septum on that side. Mucosa healthy and without catarrhal accumulation. On left side, large curvature with cartilaginous spur filling in the passage, together with osseous ridge extending to the posterior choana. In the centre, bony synechia connected inferior turbinated with septum.

The first operation was to remove cartilaginous spur and put in thick rubber splint. Four days later the osseous ridge with synechia was sawed out, and after hemorrhage had subsided, a long splint, extending to posterior naris, was inserted. For a few days it was not disturbed. Then it was taken out daily, and after being cleansed, returned. The excisions in the case were very extensive. Still, in six weeks the healing was very

satisfactory, resulting in a clear chink from end to end of the passage, with re-formation of mucous membrane.

CASE 4.—April, 1899. A boy aged seven years was brought as a mouth-breather for treatment. He had been stunned by a blow with a stick on the forehead when four years old. From that time, it was said, nasal breathing gradually became more difficult, and finally ceased.

Examination.—Curvature of cartilaginous septum to left, with ridge at base. Columnar cartilage curved to right; also adenoids in naso-pharynx. Chloroform was administered. Ridge was first excised with knife. Then two longitudinal incisions from behind forward were made through the cartilage on the curved side, the finger in right nostril acting as guide to protect the mucous membrane from perforation. A rubber splint two-eighth inch thick was at once inserted, pressing the cartilage into central position. While still under chloroform, a slip from the columnar cartilage on the right side was excised, and the adenoids removed.

Two weeks later the rubber tampon was taken out, the result being nasal breathing, and good left nasal passage.

CASE 5.—April, 1899. Youth aged seventeen years. Nose externally twisted to right side. Says he was struck by a ball on the nose two years ago, since which time there has been increasing deformity and considerable nasal stenosis.

Examination.—Extensive ridge spur on left side, with curve filling up the fossa, part of the cartilage being adherent to the middle turbinated. Under cocaine, excised front part of ridge. After compressing septum to right with chisel, inserted one-eighth inch rubber tampon. Four days later under chloroform, made two incisions from behind forwards through septal cartilage, guiding, as in Case 4, by finger in right nasal fossa, and thus preventing perforation of mucous membrane. Then pressed out septal cartilage by passing two-eighth-inch rubber splint. The septum being straightened, the tampon was left in for two weeks. The front part of the fossa being now freely open, a bony ridge extending along the lower part of the vomer was removed by saws, and a long, wide tampon one-eighth inch in thickness, but extending from the anterior to the posterior naris, was placed in position. After the first day it created no discomfort. As patient was returning home, he was instructed to retain it in position for a month.

I may say with regard to the last two cases that the cosmetic improvement will be marked.

My own experience in the use of rubber splints has, so far, been very satisfactory, and I earnestly recommend a trial of them to gentlemen, who, up to the present, have not adopted Mr. Lake's advice in this matter.

In closing, I might make one more remark. I have seen somewhere that it has been proposed to manufacture a species of perforated rubber, the perforations being small, and not to be confounded with the tubular rubber splint somewhat in use, in order to allow a certain amount of respiration and ventilation through it while in position. This, I think, would be a great mistake, as it would destroy all possibility of keeping the splints in an aseptic condition. Another thing—the perforations would be so quickly filled with nasal secretions of one sort or other, that the object for which the perforations were made would be nullified.

37 CARLTON STREET.

SURGICAL INTERVENTION IN CASES OF SPASTIC PARALYSIS.*

BY B. E. MCKENZIE, B.A., M.D., TORONTO.

It has been a matter of surprise to the writer to learn how many of the cases that come to the orthopedic surgeon for treatment are disabled as a consequence of some affection of the central nervous system. Of these, none are commonly regarded as more hopeless than the cases of spastic paralysis. Even of this special affection many varieties present themselves. No one element, however, which enters into these cases has so much influence in determining the prognosis as to the result of orthopedic treatment as the condition of the intellect in the individual case. In my observation more than 60 per cent. of all cases seen were deficient mentally. The importance and frequency of these cases have not been duly recognized until within the last few years; but it is now well understood that in the early years of life cerebral palsies are nearly as common as the spinal variety. From the etiological standpoint they have been divided into three groups:

1. Those due to prenatal conditions.
2. Those following birth accidents.
3. Those depending upon disease or trauma after birth.

The upper motor neuron is well formed only at the ninth month of intra-uterine life, and is not completely developed until the second or third month after birth. Much defect in this part is always marked by spasticity and impaired motility in the muscles supplied by the lower and terminal motor neuron. The pyramidal tracts in the cord are a direct continuation of those tracts in the brain, each being connected chiefly with the motor tract in the opposite half of the brain. Disease in these tracts implies paralysis; but as disease of these tracts in the cord is generally secondary, the paralysis is not so much the result of the lesion in the lateral columns as it is of the lesion higher up, which has given rise to degeneration in the columns of the cord. Paralysis, with disease of the lateral columns, is associated with two symptoms, which are due directly to the diseased fibres in the spinal cord. The first of these is the spastic contracture of the paralyzed parts. The second is the increase of the deep reflexes when there is a lesion in the lateral columns of the cord or in any higher part of the pyramidal tract. Rigidity, contracture and increase of deep reflexes are the constant accompaniment of these cerebral palsies of childhood. Convulsions are much more common than

* Read at the meeting of the American Orthopedic Association, in New York, June, 1899.

in cerebral palsies of the adult; the lesion is generally cortical while in the adult it is more commonly intra-cerebral; hence they are more commonly followed by epilepsy than in the adult. This proves a serious complication, as it generally brings about further degeneration and increased mental defect. If the character of the palsy is such that the lesion in the child can be proved to be capsular rather than cortical, the prognosis as regards epilepsy may be considered favorable.

Monoplegia is exceedingly rare. The form most commonly found is diplegia, affecting chiefly the lower extremities. These cases of diplegia are due nearly always to prenatal lesions or to traumatism during labor. The most common cause of the trouble is found in meningeal hemorrhage which occurs during protracted labor, and hence more frequent in primiparæ. As the hemorrhage in such cases is generally at the vertex, both hemispheres of the brain are involved, and as the centres controlling the lower extremities are situated in the upper part of the Rolandic area, and as the pyramidal tracts become involved the resulting injury produces spastic paraplegia in these cases. When the effects of the hemorrhage are confined to the surface of the brain, rigidity largely predominates over paralysis. The depth of cerebral injury in cases of traumatic origin is the chief factor in determining the form of hemiplegia or diplegia. The deeper the destruction the more profound is the paralysis. Palsies always follow the involvement of the motor cortex or its pyramidal tracts, but if the frontal lobes are affected idiocy is a consequence and is a frequent accompaniment of motor disturbance. In about one-fourth of these cerebral birth hemorrhages the spinal cord is similarly affected. The great majority of natal and prenatal cases present a bilateral palsy. After birth the tendency is to one-sided paralysis, and after the age of three it is almost the invariable form.

Though the etiology, pathology and symptoms of the early stages of this affection are matters of deep interest, yet these cases almost invariably present themselves to the orthopedic surgeon at a time when he can exert no influence upon them except through operative interference, or by methods of training and development.

Very commonly the early months of infancy have passed without anything unusual having been noticed in the history of the child's development. Even in cases where there seems to have been a backwardness observed, both the parents and the professional attendant are inclined to ascribe the condition to weakness, and to suppose that as soon as the general condition of the child shall be brought up to par, it will show a normal ability mentally and in the matter of locomotion.

Several months pass, in some instances, before a condition of

rigidity of the muscles is observed; in other cases this condition is noticed at birth. Smallness of the head, deficiency of the frontal portion, inability to sit alone after six or nine months, lack of the usual infantile efforts to talk are some of the most easily observed early signs of this affection.

From the first the nutrition of the paralytic muscles and the tendency to contractures must be met by massage, passive movements, faradism and so forth. As soon as contractures appear mechanical appliances may be used to some advantage if the intellectual development of the patient is such as to enable him to put forth a personal effort.



FIG. 1.

A. B., 8 years; Spastic Diplegia. One of my earliest cases, not operated on. Great improvement would have resulted from operation. Mentally, fairly bright.

Until the time has arrived when the child can sit erect and show some disposition to balance the trunk upon the lower extremities, little or nothing can be done through surgical treatment. In very many cases, however, the general development and strength of the child is sufficient to enable a decided effort to be made in furtherance of locomotion, but the spastic condition of muscles, especially of the adductors, the hamstrings and those controlling the feet, places an insuperable impediment in the way of successful walking. Of the cases which the writer has seen the age has varied from infancy up to twenty-eight years. When the patient has acquired sufficient age and development to have strength enough to walk, but is prevented from

so doing by the contractures and the obstruction caused by deformity resulting from contracture of the affected muscles, free tenotomies and myotomies have been made so as to place the deformed part in a correct position and to relieve restricted movement as much as possible. The muscles which demand attention most frequently, and which have been most thoroughly incised are the adductors. It has been my practice after cut-

ting these at their origin at the pelvis to abduct the limbs at once to such a position as to place them at an angle of from sixty to ninety degrees with each other, and then to retain them in this position for several weeks. While there never has been a resulting defect in muscular power which has been harmful to the patient; yet there has been in no case a return to a condition of spasm. I can commend this practice most unreservedly. Free cutting of the hamstrings may be done with a similar result; in like manner any number of tenotomies and fasciotomies in the feet may be performed to rectify any deformity which may be found present.

Not only is the contracture removed, but also there is a great lessening of reflex action which is of exceeding benefit thereafter. This is a result which I am unable to explain; but of the existence of the fact there can be no doubt.

CASE 1. M. M., twenty-seven years of age, female, bright mentally, but never able to walk. The case was a natal or prenatal diplegia, involving the lower extremities and her right arm. The exaggerated and uncontrollable spasm which would occur in this case when any voluntary effort was made was a source of much annoyance. After making numerous tenotomies in this case, the feet and limbs have been brought to a comparatively normal position, so that she has, with the aid of appliances, acquired the power to walk when she takes her brother's arm. This, however, is not the improvement which she prizes most. She experiences the greatest comfort from the lessened reflex action in all three extremities.

By intervention of this kind cases that would otherwise never have any prospect of walking, may be so much helped as to walk very well without the aid of any appliance.



FIG. 2.

W. B., 9 years. A moderate imbecile, never walked. Cut adductors, hamstrings and foot tendons, overcoming deformity. Fair degree of improvement.

CASE 2. I. W., four years, a fairly well-nourished child, bright intellectually, has never learned to walk, has very strong contraction of the adductors; extension at the knee to an angle of one hundred and forty-five degrees and marked valgus of both feet. Adductors were freely cut at their origin at the pelvis and the legs kept separated so as to form an angle of ninety degrees with each other for a period of three weeks. The hamstring tendons were cut, and the legs extended nearly to a straight position. The feet were forced into a position of varus and the limbs and feet thus retained for three weeks.



FIG. 3.

W. H., 23 years. Mentally bright. Spastic Paraplegia. Very strong adductor spasm. Myotomies and tenotomies of adductors, hamstrings and foot muscles. Marked improvement.

After removal of the fixed dressings, appliances were employed extending from a pelvic band to the boots, jointed at the ankles and knees, the latter joints being capable of self-locking. An apprenticeship in walking was spent during the few months while these appliances were worn. The child was able to walk from one room to another in three months, and now, eighteen months after operation, the limbs are straight. No appliances are worn in the day-time, and the child walks well. At night simple braces are worn, which keep the knees fully extended and the feet at right angles. Flat-foot boots are worn.

Our experience in this and other cases goes to show that very often appliances need not be worn during the day.

Massage after operation should be continued for months or years, and has a marked influence for good

in improving the tone and suppleness of the muscles.

Training in the regular class in Corrective Gymnastics is a powerful means of helping these patients. In any affection requiring the Corrective Gymnastic treatment the results obtained will depend largely upon the personal intelligent effort put forth by the patient. So, in these cases it is only

those who have at least a moderate amount of intelligence who get much help.

The same is true, but to a less extent, in the wearing of appliances. Idiots and imbeciles of the lower grade will not make the personal effort which is essential to success.

In reference to the work of training, it is worthy of remark, that it is one of the most important agencies employed by those who devote their attention to the intellectual development of nervous and backward children. Similarly it may be pointed out that surgical operations, which improve the physical condition of these unfortunates, which inspire confidence and hope, which take them out of doors, which make them independent of others in moving about, which bring them into contact with nature, become a powerful agency in lifting them to the status of intelligent citizenship.

CRIMINALS AND THEIR CHARACTERISTICS.*

BY J. H. McCASSY, M.D., DAYTON, OHIO.

At the closing of the nineteenth century, with its marvellous achievements, progress in culture and refinement, unprecedented naval victories, and the acquisition of new islands and new peoples, the United States finds itself confronted with an alarming increase of crime. During the past ten years the population of the United States has increased twenty-five per cent., but during the same time crime has increased sixty per cent.

In order to stay the rising tide of crime the assistance of the physician should be invoked to diagnose the disease and proclaim to the world that crime is the natural outcome and logical consequence of neglected education, heredity and disease, and that the "penalty" should be correction and medical treatment. The question of crime is no longer a purely legal one, but a medico-legal question. The country can flourish under Democratic or Republican rule, but not with crime so much on the increase.

The criminal should be turned over to the doctor for treatment instead of to the politician. The wardens of the penitentiaries and executive officers of reformatories should be physicians.

It is cruel to torture the born criminal for his misdeeds. It would be just as humane to torture the epileptic because he has fits, or torture any individual because he is afflicted with the

* Oration delivered at the meeting of the American Medical Association, Columbus, Ohio.

rheumatism. It is difficult to restore a man who is diseased, twisted and warped, yet every criminal has a divine spark. Repeated arrests and trials for criminals are poor economy. The second or third should be the last. The man who steals \$10 is just as guilty of theft as he who steals \$5,000, because the first would have taken \$10,000 if it had been there. The law as administered at present is intended for normal beings, and not the criminal who is an abnormal being. Careful and scientific treatment must be substituted for brutality and chains. Laws should be directed toward the criminal and not to the crime.

Man is subject to psychical and physical laws. No human act is without a cause immediate or remote. Human laws are of no validity unless they are in harmony with the laws of nature. The law of gravitation was discovered, not created. The same may be said of the laws of heredity and atavism.

The physical and moral characteristics of criminals are not so valuable in convicting them of crime as in classification and treatment. A person may have insane ancestry and be inevitably doomed to insanity, yet his liberty cannot be abridged without some warrant from his actions or words. Also, a person may have many of the essential characteristics of a criminal and through favorable environment he may pass through life as an upright citizen.

The crimes of women are generally due to emotional causes, as love, jealousy, hate, revenge, vanity, etc., because woman's emotional nature has been more highly developed.

Even children readily form likes and dislikes for persons they meet. They have an intuitive knowledge of strangers. In the child, up to a certain age, are manifested the saddest tendencies of the criminal. Even infants, at the age of two to twelve months, manifest anger and rage and will strike at nurses and break dishes (Lombroso). Stanley Hall says all children are liars. The Psalmist said in his haste that all men are liars, and were he living to-day he could say this with deliberation. National education should be empowered to classify children according to their morals, as well as their intellects. One corrupt pupil may infect the whole school. Those feeble in morals and intellect should have extra guidance and instruction. The idea of goodness should be held up rather than that of badness. The way to destroy evil is not to hold up and analyze it in order to make it hateful, but rather to let it pass out of consciousness. A child being asked if he wanted to go to heaven, replied that he did not care to; when asked the reason, he said that he didn't want to be alone up there with God and George Washington.

A large number of people lack individual initiative and try

to live in idleness. This leads to thieving. Alcoholism forms a great part of the vicious circle. Inebriety in itself is a symptom of more or less unsoundness of mind. When crime is committed by inebriates the probability of mental disease is very strong (Lombroso). The present writer (December 3rd, 1898, p. 1344, *Journal A. M. Assn.*) gives the following: Eighty per cent. of drunkenness is due to heredity. Alcohol causes thirty-three per cent. of the diseases, seventy-five per cent. of the crimes and fifty per cent. of the poverty that afflict our race; twenty to twenty-five per cent. of criminals are born criminals, the balance being due to neglected education. Only ten per cent. of criminal offences are detected and punished.

We have born sailors, born fighters, born musicians and born physicians, born criminal lawyers, born poets—born criminals. The born criminals have invariably physical signs of degeneracy. They are akin to the victims of moral insanity. The high-class born criminals possess considerable intellectual ability. They are usually free from small vices. They assert that they cannot afford to drink, as it would in time impair their expertness and dexterity. They may be religious. They are vain, superstitious and sentimental. They lack curiosity, the fundamental element in progressive education.

Criminality, insanity and genius are on the same plane. In criminality, selfishness is the ruling principle, coupled with the power of discernment and choice. There is a delusional origin of first principle. Fraternal love in the humanitarian sense is absent; still, there is honor among thieves—*i.e.*, among themselves. Moral paresis is often caused by cranial injury, fever, meningitis, dissipation, inherited fault, etc., and these may result in inebriety, hysteria, fanaticism, perverted temper, prostitution, etc.

Insanity is a delusional state of mind fixed against reason. No man is perpetually free from errors of fact or opinion, and there are few who will resist demonstration or conviction. The grand steps of civilization, often the product of genius, were conceptions which were regarded at their birth as "off" or insane, but in time they proved to be the pillars of progressive civilization.

The Church and the State have too long regarded the knowing of right from wrong as the supreme test of sanity. Judge Jeffrey voiced the true solution when he said that the best test for insanity is: "Can the victim refrain or not refrain from the commission of homicidal, suicidal, or other insane acts?"

It is difficult to tell the precise point at which criminality leaves off and insanity begins. In the commission of homicide, suicide, arson, etc., criminality often fades into insanity. Criminality may be the first manifestation of insanity. The

criminal, like the insane, is frequently unable to refrain from criminal acts. In these cases the remedy is the intermediate sentence or permanent restraint.

With the insane criminal, in the act itself lies the satisfaction, not in the object of it; while in criminals, the act is only a means to an end. To the insane criminal crime is a pleasure; to the true criminal it is a paying business, necessitating, it may be, disagreeable acts (Garofolo). The born or instinctive criminal looks upon the penalties of crime as the natural risk incident to the business without regard to the moral aspects of it. He dislikes to be deprived of the exercise of his craft.

For many years physicians have been paying a great deal of attention to microbes, and have thoroughly established the germ theory of disease. Sanitary science and quarantine are powerful agents in the limitation and cure of disease. The same agents are just as powerful in the limitation and cure of crime. The criminal is a microbe gnawing at the social organization. There are only forty thousand of them in the penitentiaries of the United States. They must all be quarantined in order to protect society from further infection.

There are always in every community certain persons who are on the borderland of criminality or insanity, and at present it seems to be nobody's business to detect and apprehend them. The coroner of each county (with assistants in large cities) should be possessed of special qualifications for this work, and be armed with power to abridge the liberty of both children and adults who are unfit to be at large. It is a delicate matter for one neighbor to institute proceedings against another, and too often the community suffers through delay and neglect. Had Guiteau and Prendergast (both paranoiacs) been apprehended sooner, President Garfield and Mayor Harrison might be living to-day. Their conduct before the commission of murder was such as to warrant the curtailment of their liberty.

The writer made autopsies on several criminals (fifty), and particularly insane criminals, and in nearly all cases found meningitis and more or less atrophy of the brain. Time will not permit me to relate more than a few examples:

A colored patient, who was committed to the penitentiary for murder, refused to eat, and he was transferred to the insane asylum at Topeka, Kan., where he died six months later. An autopsy revealed meningitis and complete exclusion of the superior longitudinal sinus with inflammatory products. A patient, whose case was in the courts of Atchison, Kan., for two years for the alleged crime of rape, finally was acquitted of the crime, but was adjudged insane and sent to the asylum. When he died, an autopsy revealed meningitis and atrophy of the upper part of both hemispheres of the brain. From an exami-

nation of a large number of cases and autopsies on a considerable number, the writer is convinced that a large number of patients are erroneously sent to the State prison instead of to the hospital for the insane.

In conclusion, a fixed normal standard for comparison is a great necessity, and it will soon be established. Physical signs and moral characteristics will be more and more available, not only in the treatment and cure of criminals, but also in classification, diagnosis, prognosis and prevention of criminal tendencies.

The physician being armed with the chemical laboratory, the X-rays and other modern means of scientific investigation, will naturally become the mentor of the people, and as he now protects our shores and municipalities from pestilence and infectious diseases, he will also protect society from crime.

Dr. J. Clarence Webster, lecturer in gynecology in McGill University, Montreal, has been appointed Professor of Obstetrics and Gynecology in the University of Chicago. The *Montreal Medical Journal*, in referring to the departure of Dr. Webster from Montreal, says: "While it is gratifying to know that his ability has led to his appointment, . . . his genial presence and his scholarly attainments have, in a few years, attached him very closely to the profession in this city and his fellow-teachers at McGill." We quite agree with our contemporary in its estimate of Dr. Webster's varied good qualities. We feel that the profession of Canada will sustain a serious loss through his removal to Chicago.

Society Reports.

ONTARIO MEDICAL ASSOCIATION.*

The nineteenth annual meeting of the Ontario Medical Association was held in the Normal School building, Toronto, June 13th and 14th, Dr. W. J. Gibson, Belleville, presiding.

The following gentlemen were introduced to the Association: Dr. Wilding, delegate from the New York State Medical Society; Dr. Christian Fenger, Chicago; Dr. Bowditch, Boston; Dr. J. C. Wilson, Philadelphia, and Dr. D. W. Montgomery, San Francisco.

Dr. J. F. W. Ross presented the report of the Committee on Papers and Business, which was approved.

In the absence of Dr. J. A. Temple, Dr. William Oldright presented the report of the Committee on Arrangements. Approved.

A Case of Muscular Dystrophy.

Dr. Ingersoll Olmsted, Hamilton.

The subject of this case was a young married man, twenty-five years of age, who had come to the doctor complaining of wasting of muscles and inability to work. His family history showed that other members thereof had been afflicted with the same trouble. The patient was presented to and examined by the members of the Association, the peculiarity of his gait and movements noted, especially interesting being his manner of assuming the erect posture from a prone position. Wasting was most marked in the region of the scapulæ, deltoids, biceps, forearm and thigh muscles, whilst those of the calves and hands were moderately well developed. Winging of the scapulæ was especially well marked.

Dr. Geikie thinks that, as we come to know more and more of this disease, destructive changes will be found existing in the nerve centres.

Dr. Olmsted, in reply: With regard to what Dr. Geikie has said, he thought there was no question that extensive atrophy takes place without any involvement of the central nervous system.

Relapse in Typhoid Fever.

Dr. J. C. Wilson, Philadelphia, read a very interesting and able paper on this subject. He exhibited a number of temperature charts, and said that especial attention should be paid to

* We are indebted to Dr. Elliott for the report of this meeting.

the condition of the gall-bladder as a causative factor in producing these relapses. He took this as his "working hypothesis," and proceeded to demonstrate the concomitant occurrence of a relapse with the renewed physical movements of the patient, the beginning of the administration of the more solid forms of food, the consequent peristalsis thus produced in the gall-bladder and the subsequent discharge of the accumulated contents of this cyst, containing large quantities of the bacillus typhosis, into the intestine, thus producing the reinfection and the relapse. This, he thought, must be due to intrinsic and not to extrinsic infection. Dr. Wilson spoke for some length on immunity and concluded in this way: Thus we have a "working hypothesis" to explain relapse, which may be set forth in these terms: Intrinsic reinfection from the gall-bladder at a time when the intestines are stimulated by larger meals of a different character, an immunity not yet complete, and reinfection at once without a period of incubation. He perfectly understands that the change in the blood serum which underlies the Widal test is not a process of immunity, but a process due to the infection. He closed his admirable paper as follows: That the histological changes taking place in the solids and fluids of the body, bringing about immunity, are also gradual; and if the "working hypothesis" stands at all, it demands that complete immunity shall be established in the primary attack, otherwise intrinsic reinfection which gives rise to the relapse, could not possibly occur.

Dr. J. L. Davison quoted Fagge, who refers to cases in Guy's Hospital that had died from the sequelæ of typhoid, weeks and weeks after convalescence had been established; and on *post-mortem* examination Peyer's patches were found still infected or still in a condition which showed evidences of the bacillus. In many cases the disease smoulders along for weeks, and while Dr. Wilson's hypothesis of the gall-bladder is a reasonable one, it hardly explains why we should have cases of relapse after thirty days and later, and therefore Dr. Davison thinks there must be other storehouses for the retention of the specific germs than that. The question of the number of relapses is a very interesting one. While Dr. Wilson stated he had seen as many as seven in a six months' illness, the largest number he had seen in any one case was three. He instanced a case of recovery after perforation. The question of immunity was an interesting one in typhoid fever. From recent researches, it appears that there are two immunity substances—one which produces an antitoxin and destroys the action of the toxin in the body, and thus serves to keep the patient alive; and the other, which is bactericidal in its action. It appears that we must have both of these in order that a patient may recover

from the disease. It is this bactericidal element which has a large part to play in the destruction of the germ itself.

Dr. Thistle asked, Why go to the gall-bladder when the bacilli are in the intestinal contents?

Dr. Wilson, in reply, stated: The infection comes from the gall-bladder, because the toxin is accumulated in a great mass in a hollow viscus, which, under physiological conditions of low diet, may remain there; but when you begin to feed the patient at longer intervals with solid foods, the gall-bladder is suddenly stimulated to empty itself. Dr. Wilson did not exclude the intestine if the gall bladder is quiescent. Under the condition of feeding small amounts of fluid alone, the gall-bladder is not stimulated to push out its contents.

TUESDAY, 2.30 P.M.

The Hon. G. W. Ross delivered an address of welcome to the Association. He expressed his pleasure at meeting the medical gentlemen of Ontario. "We look on the medical men of the Province as belonging to a class of progressive educationists, which are of assistance to the Department in maintaining the proper scientific spirit in the country." He spoke on the subject of tuberculosis, and said, if the Medical Association of this province can throw out some hints whereby that disease can be banished, they will have conferred a great boon upon the people of this country. There is no profession to which the Province owes more than it does to the medical profession. In this instance he referred to the extent in which that profession had guarded all of us from contagious diseases, had improved sanitary conditions everywhere, and made hospitals habitable. Speaking of the standards of education, he was in favor of keeping these up, and emphasized having a good general English education before entering upon professional studies; and, after four or five years of professional study, no one could say that the medical profession is not an educated body. The doctor is one of the most influential members of the community. Health in the Public schools next engaged his attention, and he exhorted the profession all over the Province to interest themselves in this most important object. Physical training and exercise should go hand in hand with mental development. He referred to the unhygienic condition of Public schools in regard to fresh-air space per pupil, lighting, heating, etc. Improvements all along this line would tend to develop a good, strong, sturdy Canadian stock. Home lessons should not be imposed upon the children so far as the Department of Education is concerned. Examinations at too early an age were injurious and harmful. The country must produce men, strong in mind and body, men with nerves that will endure the strain of public life.

PRESIDENT'S ADDRESS.

Dr. W. J. Gibson, Belleville, expressed his thanks for the honor conferred on him, having been made President of the Association. In regard to serum therapy, it was a matter of congratulation to the profession to know that so many able workers are in the field. He instanced tuberculosis, and stated that the whole world was on the alert to discover a cure for this disease. More attention should be given to personal hygiene and cleanliness. It would be difficult to estimate what good purpose it would be to report all the cases of tuberculosis to the health officers. It would be a difficult matter, however, to make isolation in all cases compulsory. He spoke of the number of diseases now treated with antitoxins. No doubt investigators were on the threshold of important discoveries. Every member of the profession should investigate the causes of disease more carefully. Dominion registration under Dr. Roddick bids fair to become an accomplished fact. It is to be hoped some feasible plan may be adopted whereby the student may be spared the examinations and the expense of being licensed in another province. In regard to over-pressure in Public schools, he was glad to know that the Toronto School Board had done away with final examinations. The combining of mental and manual work, or technical schools, is desirable. He spoke of the improvement in medical teaching in regard to there being more clinical instruction than didactic lectures, and the importance of laboratory work was emphasized. The public is indebted to the medical profession for the lives saved, suffering reduced, and the calamities averted in civilized countries. Physicians stand in the front rank of the benefactors of mankind.

Dr. Bruce Smith moved, seconded by Dr. Harrison, that the President be tendered a hearty vote of thanks for his admirable address. Carried.

SYMPOSIUM ON TUBERCULOSIS.

Sanitarium Treatment of Pulmonary Tuberculosis.

Dr. Vincent V. Bowditch, Sharon Sanitarium, Boston, said it was gratifying to notice the marked change of opinion in regard to the treatment of tuberculosis in institutions devoted to that work. Massachusetts had been the first state in America to establish sanatoria. He gave a short history of the Rutland and Sharon sanatoria. It was important to keep this class of hospitals for the incipient disease. He spoke of the educational influence of the hygienic methods employed in

these sanatoria. Open windows, even in cold weather, was to be insisted on as a special treatment of the disease. Patients have returned to these sanatoria begging to be taken back because they could not breathe in their own houses. He thought much more could be done for the patients by having them treated nearer home. Much more can be accomplished by treating consumptives in these sanatoria than by treating them in their own homes. Thirty per cent. have been discharged at Sharon as arrested cases. Dr. Bowditch has never used the term "cure," believing that the term is unjustifiable until after a lapse of years and no symptoms returned.

The causes of death in these cases: (a) Advanced condition of disease on entrance; (b) intercurrent of some other disease; (c) too early departure from the sanitarium and return home to the unhygienic conditions.

As to treatment, experiments were made with the so-called specifics. Oil of peppermint proved at times beneficial. Creosote was found to be beneficial as an aid to digestion. Antiphrisis proved negative. Had refrained from the use of the serum treatment. Abundance of fresh air, judicious exercise, pulmonary gymnastics and calisthenics form the base of all the treatment. Results at Sharon mean that sanatoria should be near all the large cities and towns. He congratulated the profession in Ontario upon the establishment of the sanitarium at Gravenhurst, and spoke also of the necessity of having hospitals for the hopelessly sick. We take away the principal source of infection when we remove these from their homes.

Pathology of Tuberculosis.

Dr. W. T. Connell, Kingston, who was to read this paper, was unavoidably absent.

Earliest Diagnosis and Selection of Cases for Sanitarium Treatment.

Dr. N. A. Powell stated that for ten years he had practised in a part of the Province where phthisis is practically unknown. The diagnosis of early phthisis calls for what we understand by incipient or early phthisis—the pre-tuberculous stage. In this regard our views have changed materially within recent years. Up to the time of the demonstration of the bacillus, a case was considered early unless there were large growths within the lung, and until gross constitutional symptoms had shown. There is an inherent tendency towards recovery in phthisis when recognized early. This leads to the question, how often is phthisis recognized in an early stage, in a stage before physical signs are manifest in the chest and before expectoration has commenced. A very slight proportion of

such cases are recognized. Why? The teaching of the students in diagnosis is exceedingly efficient. Why are mistakes made outside, and disease of the lungs not recognized until serious inroad has been made into the health of the patient? A part of it comes from the earnest belief that the physician's education has been complete though crowded. Medical students crowd the course in surgery and gynecology, but neglect physical diagnosis. He believes early diagnosis will depend upon close study and family and personal history. There are certain aids to the examination, such as the use of the fluoroscope and the tuberculin test. In regard to the state of the family history and the personal makeup of the patient, in the careful examination it is important to estimate weight and height together before you can arrive at anything of importance. The symptoms of early phthisis are uncertain. None of them upon which you can rely. A man who is in apparently excellent health may have serious pulmonary disease. It is sometimes important to notice any scars in the neck. As to cough and early hemorrhage, distinct hemorrhage which comes with comparative earliness are two symptoms of importance. The patient should be made to cough in the presence of the physician, and any sputum thus gained should be examined. In regard to physical diagnosis, if you wish to estimate the value of a stethoscope, take a watch and place it on the table, then, with the back of the hand on the watch, place the bell of the stethoscope in the palm of the hand and listen to the tick of the watch in this way. In examining a patient, the stethoscope should always be used whose accuracy is above suspicion. The evening temperature running up $\frac{2}{3}$, $\frac{3}{4}$ or 1 degree, associated with morning pallor, is one of the most important elements in early diagnosis. Dr. Powell spoke of the physical examination, and said the patient should always be stripped to the skin and examined in a quiet room. If you can get association of relative dulness in the spinous fossæ with the slightest accentuation and conveyance of the whispered voice or any prolonged expiration, it is safer to treat such a patient as being probably tubercular. In a case presenting progressive loss of weight and loss of physical energy, if one can get a little wavy or cog-wheeled respiration near the lung, it is safest to treat such a patient as being probably tubercular. Personally, without having much basis to go on, he said that he was afraid to use tuberculin as a test for fear of lighting up tuberculosis. In a case of prolonged expiration and evening fever, he was very unwilling to try the tuberculin test. As to the fluoroscope, Dr. Williams, of Boston, has done perhaps the best work upon this subject. With this instrument, it is perfectly easy to recognize excursions upwards and downwards

of the diaphragm during respiration, the average excursion in the adult male being about two and one-half inches. If it is notably lessened on one side, it would raise strong suspicion of the presence of tubercle. Dr. J. E. Graham took the position some years ago that there might be considerable advance in the condition without being recognized by even a trained observer. The apparatus of Roentgen is of positive value when a trained observer recognizes the movements of the diaphragm, and a man of expertness may recognize degrees of shading which will be of benefit in diagnosis.

Home Treatment and Prevention of Tuberculosis.

Dr. T. F. MacMahon read this paper, and first spoke of how we should treat the patient in his own home, and what means we shall take to cure the disease and stay its ravages. Without a specific germ there could be no tuberculosis. The main source of infection is the sputum and then infected food. Prompt destruction of the sputum would go far towards the removal of the disease. The public generally and the patients generally must be educated to this fact. Instruct your patients never to spit on the floor or into a handkerchief. Sputum should be received into proper spit cups. That the danger from handkerchiefs is a real one is borne out by the facts that washerwomen in health resorts have contracted the disease through washing these handkerchiefs. Very fine drops of saliva may be a source of infection. Intimate association with coughing consumptives is dangerous to nurses in the rooms. Another important instruction is that rooms should be dusted with damp cloths using a disinfectant solution. Government and health boards must take the question up in earnest. Without education of the public, all our efforts will be in vain. Of course newspaper propaganda should be carried on. Premises occupied by consumptives and vacated, should be made fit for occupation by the Health Board. Bacteriological examination is quite as important. Association of consumptives with other patients in public hospitals is injurious and scandalous. Consumptives should not be treated in the ordinary hospitals. There should be systematic inspection of dairies and food supplies. There is also danger of infection from domestic pets, cats, dogs, birds, etc. The germ of tuberculosis is always with us. Patients should have as much open-air exercise as it is possible to acquire. Individuals especially predisposed should receive special attention. If the family physician would make it his duty to watch out for badly-formed chests, he could do much. Prompt attention should be paid to anemic and dyspeptic young women. Every precaution should be taken against cold-catching. The patient should not choose a seden-

tary occupation. Much outdoor life is especially desirable. Cure is altogether a question of instruction. There should be no cough mixtures. The nearer we approach the methods of the sanatoria, the better our results will be. The only method is the open-air treatment. The patient should occupy the room, when in the house, with the most sunshine. Nothing should be allowed to interfere with the fresh-air treatment. Rest in the open-air will improve the digestion. Excellent results have been obtained from this treatment in the sanatoria. Cod liver oil, where it agrees, is undoubtedly useful. The best results follow the administration of creosote—not too large doses.

Care and Prevention.

Dr. Charles Sheard spoke of the open-air treatment as the ideal treatment from the tubercular standpoint. In every case where we find the bacillus present, we have a case of tuberculosis to deal with. This is not the only disease which fresh air benefits. Many cases of bronchitis and bronchiectasis are also benefited thereby. The sanitarium is anxious to do cures in tuberculosis. There are a great many cases with cavities in the lungs, and we have to care for those cases as well. We have all seen these cases very recently put side by side in the same ward with a patient with chronic bronchitis, with another with pleurisy, and with another case with obscure chest trouble; yet there ought to be better places for the care of these cases. There ought to be separate buildings in connection with our hospitals for those cases which the sanatoria will not admit. The profession ought to stand united for the attainment of this object. He spoke of the benefit of the open-air treatment, and thought there should be glass houses and glass sheds so as to protect them from the changes in the weather. Much can be hoped for if patients are kept constantly in the open air. As regards the danger of getting tuberculosis from animals, Dr. Sheard quoted Clifford Albutt who fed his own family with the meat of tuberculous cattle, and yet none of them contracted the disease. The tuberculin test applied to cattle is a very crucial one. In one cow which responded to the tuberculin test, tuberculosis was limited to one gland alone. Generally we agree that tuberculous milk is dangerous according to the stage of the tuberculosis in the animal. How far are we prepared to go in enforcing laws *re* infection of this disease in animals and in man? He thinks the practitioners should report this to the Health Board. We must understand that we have got a vastly different disease to deal with than the acute infectious diseases which run their course in a few weeks. How much separation from the general public are we prepared

to enforce on a consumptive or whether we are right in doing even this. It is very questionable if we are prepared to enforce segregation in these cases and it is doubtful if the public is ready for this just now. In the meantime steps should be taken to notify hotels and lodging houses of cleansing rooms occupied by consumptives.

Dr. Beeman, Newburgh, spoke of the bacteriological work done in the laboratory, and thought that more should be done by the general practitioner. He thought he better secured the confidence of the patient by having this apparatus in his own office to give this gross diagnosis.

Dr. P. H. Bryce dealt with the establishment of sanatoria from the governmental standpoint and quoted statistics showing the widespread prevalence of tuberculosis in this province.

Dr. McConnell, New Mexico, told of three years' experience in the far south-west. He stated that more patients were now sent out there in whom as yet the bacillus has not been demonstrated, *i.e.*, in the pre-tuberculous stage.

Dr. John Hunter said that every physician should examine the chest of every one of his patients, no matter what disease he came to be treated for.

Dr. Wm. Oldright: Notification of the disease should be given in all cases. Disinfection after habitation by a consumptive should be carried out; also sleeping-cars after carrying a patient to a health resort. Thought we ought to have sanatoria near the city.

Dr. Playter spoke of the use of ozonised air in the treatment.

Dr. Coventry thought la grippe was responsible for laying the foundation of many of these cases.

Dr. Price-Brown: The lungs are only part of the respiratory apparatus. Every medical man should be able to use the laryngoscope and the rhinoscope. By treating the nose and throat, you can sometimes prevent the disease, and do not forget that you may have tuberculosis without cough or expectoration.

Resolution *re* Dr. J. E. Graham.

It was moved by Dr. N. A. Powell, and seconded by Dr. J. C. Mitchell, Enniskillen, That the Ontario Medical Association in session assembled desires to express its profound sympathy with its first Treasurer, and one of its most active members, Dr. J. E. Graham, in the illness with which he is now contending. The Association recognizes Dr. Graham's great success as a teacher, his accurate diagnostic skill and force as a writer as well as his distinguished position as a consultant, and desires to express the hope that his present improvement may continue to perfect restoration. Carried.

The annual banquet of the Association was held in the evening at McConkey's restaurant, Dr. W. J. Gibson presiding. A very enjoyable evening was spent by all present.

WEDNESDAY, JUNE 14.

SURGICAL SECTION.

Dr. Wishart, London, was elected chairman of this section.

Inguinal Hernia.

Dr. Wm. Oldright presented four patients in all of whom he had performed the radical cure very recently. He quoted the indications for and against operating in these cases as set forth by Dr. W. B. Coley in "Sajous' Annual." He thought Halsted's modification of the Bassini method was not an improvement.

Treatment of Hernia.

Dr. A. McKay, Ingersoll, estimated that something like 20 per cent. of the population is ruptured. He exhibited a new truss which he had contrived after a year's experimenting, and stated that in making trials of its efficiency, he had selected men who were lifting all sorts of heavy loads, and found that it would give the greatest satisfaction. The idea of the truss is to allow of the body motion, a constant wavering of the pad over the ring.

Dr. W. J. Gibson spoke of the difficulty of supplying patients with proper trusses. Dr. McKay's truss is devised to prevent the excoriation of the skin.

A Peculiar Gynecological Case.

Dr. Harrison, Selkirk, Ont. The subject of this case was a woman with a considerable family. Having become pregnant again—two and a half months—she was advised by a neighbor to produce an abortion, as it was a very easy thing to do, and no trouble arose other than an ordinary monthly sickness. A glass stylet penholder was passed blunt end foremost, which slipped from the woman's grasp, and was lost to her touch. On examination, the doctor could find no rent or tear of any kind either in the vaginal walls or in the walls of the uterus. Even after putting the woman under chloroform, the stylet could not be found. The woman was most positive that it was there, and that it had been passed blunt end foremost. An exploratory abdominal operation was performed, and the stylet was found in the region of the spleen with the point almost impinging upon the diaphragm where the heart lies on that muscle. The woman recovered with nothing worse than a stitch abscess.

Dr. Powell cited a similar case where a knuckle of intestine was found protruding through a rent in the anterior wall of the uterus. The woman died, however, in this case.

Dr. Roe, Georgetown, asked if the woman had aborted.

Dr. Harrison thought so.

Dr. J. F. W. Ross spoke regarding perforations that give rise to practically no symptoms. He instanced three cases seen recently in practice, in which with well-marked rupture of the uterus, there were no symptoms of collapse.

Dr. E. E. King thought it was probable that the stylet in Dr. Harrison's case had never gone into the uterus at all.

Dr. Harrison thought that the pen had passed through the fornix, but he could see no rent whatever in the vaginal wall.

The Seminal Vesicles in Health and Disease.

Dr. E. E. King described this condition as a pyo-salpinx masculinus. He exhibited a number of sections and specimens, and said that this was a storehouse as well as a secreting organ. He further described the normal condition and relations of the organs, and also their condition in enlarged prostate and in a previous gonorrhea. He stated he had examined during the last week, in the Asylum, ten cases of chronic masturbators, and in only one of these were the vesicles found exceedingly enlarged. The prostate was only found enlarged perceptibly in one case.

Dr. Primrose and Dr. Frank McConnell discussed the cases.

A Note on Kocher's Method of Radical Cure of Hernia—Femoral and Inguinal.

Dr. Primrose gave a very lucid blackboard description of this operation, and showed clearly how the inguinal pouches in the peritoneum were obliterated. As a guide in performing this operation, it was best to introduce a finger into the canal and cut upon the finger. Kocher recommends the silk suture in both operations.

Dr. Ferguson, London, Ont., discussed this paper.

Fibrinous Rhinitis.

Dr. D. J. Gibb Wishart stated that several cases of this had occurred last summer in his own practice. In the text-books published this year, Lennox Brown and Walsham both state that it is a disease distinct from diphtheria, and that these cases need not be isolated.

Dr. Price-Brown, Dr. L. L. Palmer and Dr. Ingersoll Olmsted discussed at some length Dr. Wishart's interesting paper.

Electrolysis and Cataphoresis in the Treatment of Inoperable and Recurrent Malignant Disease.

Dr. R. N. Fraser, Thamesville, Ont., read a highly interesting report of this case and its treatment. He said in this connection that he wished to report the history of a case in which apparently a favorable result had been secured after repeated failures. He was not aware that any case had heretofore been reported in Canada in which a similar plan of treatment had been adopted, and went on to give the detailed history of the case and its treatment. It was a case of malignant disease of the right testicle occurring in a married man of forty years with the history of a previous orchitis following ordinary mumps. After a prolonged bicycle ride the testicle had become very much enlarged and the pain almost constant though not severe. Aspiration had been performed several times and septic inflammation had followed. A section of the tumor had been sent to Dr. Caven, Toronto, who pronounced the case one of cystic sarcoma. The growth was removed. It was about the size of a walnut. Dr. Anderson, Toronto, said it was a carcino-sarcoma. Dr. Fraser then described at some length the electrical treatment followed.

On Some Points in the Diagnosis of Eye Affections.

Dr. R. A. Reeve read a very interesting paper with this title. He said this was important for the general practitioner as patients were continually consulting them with regard to defective sight or stenopia or for actual disease of the eye. It was necessary in the first place for the general practitioner to know whether there was any disease present. As to trauma, whether any existed, and to what extent was the eye-ball damaged; was it in the fundus or in the orbit itself. If a large magnet be brought close to the eye, pain is experienced, owing to the fact that the foreign body is attracted to the magnet and thus injures the tissues. Then in some cases you will have to determine whether there is rupture of the eye-ball itself posteriorly. He spoke of rupture by contre coup and also luxation. For foreign objects we should carefully scrutinize the anterior eye and the conjunctiva. He thought the time had come when the general practitioner should have a fair knowledge of the eye and be able to apply it. He should be able to fit the eyes with proper glasses when required. Patients who can read 20/20 will bring ordinary print close to the eye. Here we should suspect astigmatism. Then there is a clue to be got by testing the tension of the eye. This will give you a clue to the presence of glaucoma. Another point that should be attended to is the testing of the field of vision by closing one

eye with the hand or using a watch glass. Diseases of the cornea and conjunctiva are to a large extent now capable of division bacteriologically. Be on the *qui vive* for tobacco amblyopia in cases of cataract; and it is important to urge gentlemen over fifty to reduce the quantity of their tobacco.

MEDICAL SECTION.

Dr. J. Russell, Hamilton, was elected chairman of this section.

Ophthalmology and the General Profession.

Dr. G. H. Burnham read this paper, the object of which was to bring forward some of the diseases of the eye and also some disturbances associated therewith, which required early recognition in order to be successfully treated. He instanced acute glaucoma, chronic glaucoma, tobacco poisoning causing dimness of sight. In regard to the subsequent changes produced by an attack of iritis, he did not for these perform an iridectomy, but instead of an operation gave his combined form of treatment, viz., mercury and the iodide of potassium internally, and pilocarpine hypodermically. He said his results were in this way much better than by an operation. In regard to diseases of the tear passages, he strongly recommended early treatment. He does not favor the employment of the largest probes and does not probe frequently, as good if not better results can be attained without the additional suffering which frequent probing is always associated with. He also spoke of eye-strain causing so many nervous disorders, as headache, neuralgia, constipation and St. Vitus' dance, and of the great importance of having the sight tested by an oculist and not by those so-called "doctors of refraction."

Dr. G. S. Ryerson thought that the paper fully met the requirements of the subject. Ophthalmia neonatorum was, however, omitted. A large percentage of eyes were lost from this cause. Medical men should take great care in cleansing the maternal parts before delivery and the eyes of infants later. Credé's methods greatly reduced the percentage of this disease. One or two drops of a one per cent. solution of nitrate of silver should be dropped into the eyes. This is not too strong. In regard to the question of refraction, doctors of refraction or doctors of ophthalmology was very misleading. He had tried to legislate against these when in the Legislature, and had approached the Government *re* these titles being used unlawfully. The giving of glasses by laymen to the public has been long done; but these titles are very misleading to the public. The question of refraction was a most difficult and complex one, and how can these men on a few months' training undertake such work and treat such cases?

Dr. R. A. Reeve said that in the preventive treatment of ophthalmia neonatorum, bacteriological examination of any natural discharge is of great help. He also upheld the application of nitrate of silver or perchloride of mercury to eyes after birth. Also recommended protargol, two to four per cent., as being painless and effective. The Provincial Board of Health should give instructions to doctors and maternities that Credé's or some method be used regularly. He referred to the question of refraction and the difficulty of dealing with it.

Dr. Burnham: Only some points can be referred to in a short paper. He agreed with Dr. Ryerson and Dr. Reeve in regard to refraction, and thought the general profession negligent in the majority of cases.

The Insanity Plea in Medical Jurisprudence.

Dr. J. Russell, Hamilton, read a carefully prepared paper on this subject. He thought the public were beginning to doubt that the law was being properly administered in these cases. The question was of interest to the general practitioner as well as to psychologist. It became every physician to acquire such a general and even special knowledge of the subject as to be able to acquit himself creditably in the witness-box without bringing personal discredit on himself or the profession.

Dr. T. F. MacMahon upheld Dr. Russell with regard to forming a competent commission to deal with insanity cases in law.

Notes of a Case of Torticollis.

Dr. D. C. Meyers, Toronto, presented a patient, a married woman, aged 39. The trouble came on at the age of twenty-five, just after the birth of her last child. At that time she was very sensitive as to people looking at her. About three years ago she first noticed that her head would turn voluntarily to the left shoulder, slight at first, in any position but the recumbent one. She is obliged to keep her hand to her chin to keep her head in position. The right sterno-mastoid is prominent and much hypertrophied. Her neurasthenic symptoms have gradually disappeared. The treatment consisted in separating the patient from her friends, Swedish movements gradually increased, galvanism and the internal administration of the iodide of potash and salicylate of soda.

Acute Diabetes.

Dr. A. F. McKenzie, Moncton, Ont., reported a very interesting case of this disease. It occurred in a young man of twenty-one years, a cheesemaker. He was passing about four times the normal quantity of urine daily, of a sp. gr. of 1032. Con-

tinued slow pulse and subnormal temperature were noted. The termination of the disease was fatal through an inter-current attack of influenza.

Treatment of Eczema.

Dr. Graham Chambers read a creditable paper on this subject. He thought the first step toward the successful management of a case of eczema was to make a thorough examination of the patient with the object of determining the etiology and the course of the disease. Bacteria, no doubt, take an important part in the etiology. There is one principle in the treatment of acute eczema; that is, to give rest to the skin as completely as possible. Repeated washings with water are contra-indicated. Dr. Chambers uses externally a mild antiseptic, sedative, astringent lotion, a combination of black wash and calamine lotion, and recommends it very highly. The internal treatment is equally important. Rest of mind and body are sedatives to the skin, and should be secured. Confinement to bed is sometimes of great aid. Wine of antimony is a valuable remedy in subduing the inflammation of the skin.

Dr. Coventry upheld the internal treatment with mercuric chloride 1-64th grain and calomel at times dry locally.

Dr. Chambers thought mercuric chloride did not agree in some cases. He gave calomel in larger doses, every four days or so, and salines if needed. Calomel locally in seborrheic cases, he thought, had no effect. About 50 per cent. of the cases of eczema are probably parasitic.

The Present Status of Ergot in Obstetric Practice.

Dr. K. McIlwraith, Toronto, read a paper with this title. Administration during pregnancy where there has been post-partum hemorrhage at previous labors. Given in small doses *t. i. d.* in combination with strychnine, it delays the onset of labor and prevents the post-partum hemorrhage. In the first stage it is never given now. In the second stage, to hasten lingering labor. Its advocates limit its usefulness to cases in which there is absolutely no impediment to delivery, even in the passages or in the size and position of the child. It must never be given in a primipara. These conditions exclude its use in most cases. It should not be used in post-partum hemorrhage in view of the trouble it causes with the secundines. Its routine administration throughout the puerperum retards involution instead of hastening it, and it diminishes milk secretion.

Dr. Roe, Georgetown: The use of ergot has changed very much in the last twenty years. He used to give it when the head was on the perineum and he never had any bad results.

Dr. Machell: Dr. McIlwraith has put the question very fairly. He has given both sides of the question. For the first stage ergot is never given now. In post-partum hemorrhage it is of very little use. For some years now he had given no ergot at all. He thought the pressure on the fundus the best.

Dr. G. Gordon: There is a tendency to go to extremes in this matter. If all was clear in the second stage and pains slow, he would not hesitate to give ergot.

Drs. Hunter, C. J. O. Hastings and Cruikshank further discussed the paper.

GENERAL SESSION—2 P.M.

A Case of Coccidial Infection.

Dr. D. W. Montgomery, Los Angeles, Cal., gave a clear description of this case. First, there were general symptoms of the lungs simulating tuberculosis. The process went on for some little time—a few weeks—and then he got a disease of the skin which was well shown in the photos the doctor exhibited. The disease of the skin consisted of large tubercles which at first appeared as little maculæ, then grew to be small tubercles, then large tubercles. These tubercles ulcerated and were covered with crusts, and when you would grasp one and squeeze it between the fingers, you could see that the inside was granular-looking, like a fig. We examined some of his sputum, but there was no tubercle bacillus to be found in it. The doctor took a piece out of one of the crusts, and the first thing he struck was the small round bodies as shown under the microscope. These have a clear double contoured membrane and granular contents. Just exactly what these organisms are we do not know. Previous to this case two other cases have been reported. As far as the diagnosis of the disease is concerned, from the symptoms alone would be rather difficult. He came to the conclusion that it could not be iodide of potash poisoning—for these tubercles looked very much like the iodide rash—because the man had not been taking iodide of potash. We exclude the mycosis fungoides from the fact that there was no preceding erythematous stage nor such lesions on the body. He here exhibited a photo showing a case of mycosis fungoides. In this you can get an idea of the eczema of the hands and arms, and the tomato-like masses were well shown. There was no history of syphilitic disease. In one of Rexford's cases the disease started in the lungs, to later break out on the integument. What we call this micro-organism, we do not know. Rexford's cases were submitted to the best experts we have on these micro-organisms. We expect the disease will be fatal in

this case. The disease occurred in a young German of twenty-one years, who came to California at three years of age.

DISCUSSION IN SURGERY.

Diseases of the Kidney Amenable to Surgical Treatment.

Dr. Christian Fenger, Chicago, read this paper. The subject was a large one, he stated at the outset. The origin of the surgery of the kidney was in 1869—thirty years ago. This new field of surgery developed rapidly as is well seen from a review of the literature; for instance, from 1889 to 1899, what he called the third decade, no less than 800 papers had been published on this one subject. Within the last five years came the surgery of the ureter. It is represented in the literature for the last ten years by about ninety papers. We can divide the surgery of the kidney into two periods. The first ten years we can term the period of nephrectomy. During this term the loss of one kidney was not considered so much as a cure of the patient. This period did not terminate after this ten years; but the dawn of the second period, or the period of conservatism commenced, instead of nephrectomy, a less radical operation to locate the disease, without sacrificing the tissue of the kidney at its beginning. In 1881 Hahn made nephrorraphy for floating kidney. But by far the most important step and one whose consequences have been most far-reaching, covering the entire field of surgery, we owe to Henry Morris, of London, who, on February 11, 1880, had the courage to open up the healthy kidney tissue and remove an oxalate of limestone from the healthy kidney by an incision through the renal parenchyma. No operator had had the courage to do this before, but from suppurating and distended kidneys which did not bleed when we cut through them. From Morris' important operation dates the possibility of the development of conservatism, which is pressing forward, fighting its way toward the goal of renal surgery, which is not the cure of the patient, but it is the preservation for the patient of the tissue that is valuable for secretion. Morris' operation has made it possible to save the kidney from the destroying influence of stone, to operate on the healthy kidney with a stone in it. In the third decade, the latest step forward in conservatism is the surgery of the ureter. It is a somewhat limited field. With the exception of ureterectomy for tuberculous infection, which is only a small part of it, the whole of the field of surgery of the ureter has for its aim absolutely nothing but conservatism of the kidney.

It is a matter of vital necessity for any one who operates on the kidneys to examine the urine for the quantity of urea before any operating is done. There is compensatory hyper-

trophy of a healthy kidney when its fellow has been removed or destroyed by disease. The urine must be withdrawn and collected in sterilized test tubes. Examination of the urine must be made without delay, because urine changes rapidly by decomposition. There should be a chemical examination for albumen, blood and sugar. There should be a quantitative examination of the urine. We have got to know the quantity of the urea for twenty-four hours. The life of the patient depends upon that. Dr. Fenger spoke of the use of the cystoscope, and the most important step in diagnosis, the last step, the step that gives us the final answer to the question, what the matter is, *i.e.*, direct examination of the kidney through an incision in the lumbar region or the peritoneal incision. The lumbar method permits of much more direct examination of the kidney than the abdominal one. The peritoneal is seldom resorted to, whilst the lumbar incision is the one in daily use. The essayist then spoke of the manner of controlling renal hemorrhage by compression either with the fingers, or the clamp. If that does not stop the hemorrhage, it is sutured. Failing this we have to pack the opening of the kidney into the pelvis and trust to the compression of the gauze. Dr. Fenger next took up the different diseases of the kidney for which we operate, and in a classical manner described each and the indications for and against operation. In concluding his very able and exhaustive paper, Dr. Fenger returned his sincerest thanks to the Association for the opportunity that had been extended to him to meet the medical gentlemen of the Province of Ontario.

ELECTION OF OFFICERS.

President, J. E. Graham ; First Vice-President, A. H. Wright, Toronto ; Second Vice-President, M. I. Beeman, Newburgh ; Third Vice-President, R. J. Trimble, Queenston ; Fourth Vice-President, A. F. McKenzie, Monkton ; General Secretary, Harold C. Parsons, Toronto ; Assistant Secretary, E. H. Stafford, Toronto ; Treasurer, Geo. H. Carveth.

Dr. William Britton presented the report of the Committee *re* Health of Public and High School Children. In connection with this report it was recommended: (1) That the number of subjects of study prescribed by the Education Department be lessened. (2) That home work be curtailed. (3) That less exacting examinations be imposed on the pupils. (4) That more time during school hours be devoted to physical culture. (5) That trustees should confer with members of the medical profession, as to lighting, ventilation and capacity of school rooms. (6) That the curriculum generally should be framed with full consideration of the paramount necessity for preserving the physical health of the rising generation.

The report was adopted.

Re HOSPITAL ABUSE.

Dr. W. J. Wilson read the report of the Committee appointed for this purpose.

Your Committee find on investigation as follows :

1. The general tax paid by the public for medical and surgical attendance is dwindling and the willingness of the public to be pauperized increasing.

2. This is due mainly to the mode of management of the hospitals and the operation of "The Charities and Public Health Acts" under which \$110,000 is expended in a per capita rate on the hospital alone. Successive changes of the law tend towards the socializing of the profession and the curtailing of the domain of the private practitioner.

3. Particular instances of the evil are as follows :

(a) Out-patient departments, so far as we can find out, with only one exception are in the habit of handing the prescriptions to the patients, who carry them away and frequently hand them around among their friends.

(b) The Emergency Hospital of Toronto is being utilized at practically no expense to the patients, for daily accidents of all kinds which, till this hospital began operations, invariably went to private practitioners.

This we find to be a direct violation of our Code of Ethics, Art. 5, Sec. 8.

Therefore your Committee beg leave to suggest :

1. That the Committee on Legislation be requested to present to this Association at its next meeting a review of the operation of "The Charities and Public Health Acts" and their effects upon the status and emoluments of the profession.

2. That the Committee has confidence in both the ability and the willingness of the various hospital boards to remedy the evils complained of, particularly after attention has been directed to specific instances of what your Committee humbly believe to be wrong.

3. Your Committee recommend that it be made a rule in all hospitals that no patients be entitled to free treatment whose hospital maintenance is provided for, including society patients paid for by lodges, except as an act of charity.

4. That all prescriptions in the out-door department of our hospitals and of the various dispensaries be kept on file and not taken away by the patients.

5. That emergency hospitals should simply render "first aid" and relieve the patient until his family physician or substitute arrives, when the further care of the case be handed over to him unless it be a case which will receive a municipal order, when it will be treated by the usual hospital staff.

6. That the sending of accident cases by wealthy corporations, and especially when there is an accident insurance carried on employees, be carefully looked into and any abuses resulting remedied.

This report was unanimously adopted.

Dr. E. J. Barrick presented the report of the Committee dealing with the consumptive poor, which was adopted.

Dr. Wm. Oldright presented the report of the Public Health Committee in regard to the treatment of inebriates, which was adopted.

The Treasurer and Secretary presented their reports.

Motion for adoption. Carried.

Dr. G. B. Smith presented the report of the Committee on Necrology: Drs. H. H. Wright, Toronto; H. P. Wright, Ottawa; J. H. Mullin, Hamilton; William Youker, Belleville, and Patullo, Toronto.

The usual *honoraria* and votes of thanks were then passed, and the meeting adjourned to meet in Toronto in June, 1900.

Editorials.

THE MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

The recent meeting of the Ontario Medical Association was a fairly good one, although the attendance was not large. The presence of Dr. Wilson, of Philadelphia; Dr. Fenger, of Chicago; and Dr. Wilder, of New York State, added much to the interest taken in the proceedings. Dr. Gibson, of Belleville, the President, was prompt and impartial in his rulings, and through his good judgment and tact did much to make the meeting run smoothly. The principal innovation, as compared with former meetings, was the banquet held on the evening of the first day, instead of the luncheon formerly supplied by the profession of Toronto. A large number of local physicians expressed their regrets respecting not so much the time and character of the banquet as the fact that outsiders were asked to buy their tickets. We are heartily in sympathy with the views of these gentlemen, and believe that Toronto ought to be allowed to entertain the members living out of the city. We are glad to be able to say that the change in the by-laws relating to the entertainment was made on the suggestion of certain non-residents who expressed the opinion that the profession of Toronto should not be asked to entertain, except in a purely private way.

The election of Dr. Jas. E. Graham to the presidency appeared to give full satisfaction to all the members, who freely expressed deep regret at his absence from the meeting, and especially the cause of his absence. He was one of the most active promoters connected with the inauguration of the Society in 1881. It will be remembered by those familiar with the events of that year that some physicians, especially those living in the vicinity of Ottawâ, were opposed to the formation of a new society. They feared it might interfere to some extent with the success of the Canadian Medical Association. Dr. Graham thought the new society would not injure the old one, and corresponded with many physicians in all parts of the Province with the object of getting their views on the question. He found, with the exception already mentioned, that there was a general

consensus of opinion in favor of the new organization. It is probably unnecessary to mention that it is now generally conceded that the promoters, who were chiefly physicians of Hamilton and Toronto, established eighteen years ago a medical society which, in many, if not all, respects, is the most successful that Canada has known.

A LOCAL HABITATION FOR A NATIONAL MEDICAL ASSOCIATION.

The American Medical Association is in many respects, perhaps—as to vital points—in all respects, similar to our own Canadian Association. We in this country have watched the career of the large society across the border with great interest. For many years it was greatly weakened by internal dissensions, and especially by the serious split which occurred about the time of the meeting of the International Medical Congress at Washington in 1887. For some years many of the brighter lights in large medical centres completely ignored the national organization. A great improvement has, however, recently taken place, and we are glad to know that the recent meeting at Columbus was in all respects an excellent one.

The President, Dr. Mathews, of Louisville, in his address dealt with many subjects of interest connected with "Our National Body," but referred to one question which has often been discussed by members of our national body in Canada. The question was, "Shall we have a local habitation?" The *New York Medical Journal* by way of comment says: "It is satisfactory to find that Dr. Mathews favors a local habitation for the Association, and we have no fault to find with his choice of Washington as the locality, although we have recently favored a number of central cities as places in which the Association should meet in turn."

In Canada many have advocated one fixed place of meeting for our Association, and have suggested the capital, Ottawa, as the proper city; others have pointed out that in the past the meetings at Ottawa have not been as largely attended as those in other cities. We have to recognize the fact that our most successful meetings have been held in Montreal, and many think that it would be unfortunate to make any rule that would

prevent us from frequently going to that city. Others have suggested a plan similar to that which has been favored by the *New York Journal* in the United States, *i.e.*, the selection of a number of cities (say, four) where the Association would meet in turn. While we have referred to certain opinions that have been expressed mostly in an informal way, we should add that a large proportion of the members of our Dominion Association prefer to make no fixed rule as to place or places of meeting, but rather to leave the question always open, and allow the Society to decide from year to year where the meetings shall be held.

THE LONDON POLYCLINIC.

We have before referred to the establishment of a Polyclinic and Medical Graduates' College in London, England, where the vast amount of clinical material will be utilized to better advantage in the interests of medical graduates than it has been in the past. We learn from the *Practitioner* that the institution is now suitably housed in a building which was formerly a High School for girls. We quote as follows from the article referred to in the *Practitioner*: "There is ample room for the lectures and demonstrations and also for laboratories. There is to be a convenient reading-room, and it is expected that, owing to the liberality of Mr. Jonathan Hutchison, there will shortly be a valuable museum. In short, the institution will be fully equipped for its work, which is the provision of opportunities for country practitioners and men in the service of keeping themselves, with a minimum of trouble, posted in the latest advances in methods of investigation and of medical and surgical treatment, and for foreign doctors of seeing something of the immense amount and variety of clinical material which London offers beyond all other centres of population in the world. It is necessary to emphasize the fact that the Polyclinic is not intended to be in any sense a rival of the general or special hospitals; nor is there the most remote prospect of its developing or rather degenerating into a twelfth metropolitan medical school. It is distinctly and exclusively for men who, in a medical sense, are no longer *in statu pupillari*, and who wish to perfect, in one direction or another, the knowledge and

the skill which they have already acquired in their respective schools. . . . The Polyclinic, in fact, will work in co-operation with the general practitioner on the one hand, and with the hospital on the other—never in competition with either. The reading-room will supply the stranger in London with some of the advantages of a club, while at the same time assisting him in his work. In connection with it there will be a bureau where all information may be obtained as to courses of instruction, cases of special interest, operations, etc., at all the hospitals and schools of London. In a word the Polyclinic will take the medical visitor to London in hand from the time of his arrival and ‘put him through,’ as they say in America.” We have no doubt that Canadian physicians who visit Great Britain will gladly make use of this Polyclinic for post-graduate work.

INTERPROVINCIAL REGISTRATION.

“We hold a vaster empire than has been,” and without distinction of party or creed we are proud of being citizens of it. At our various medical conventions members from distant provinces seem, and are, glad to meet each other, and do not appear to think each other a bad sort of fellow professionally or otherwise. Why do we then keep our professional relations in such a way that if one of these good fellows steps across the boundary which separates him from the other good fellow’s province, and announces himself as ready to practise his profession, he may find himself in a criminal court with the connivance of his good friends of the day before as represented in Council. It may be objected that we have the same feeling of professional admiration and good fellowship for some of our American cousins who attend our meetings, and yet would not wish to open our doors to all who may possess an American permit to practise the healing art. There is this difference, however, that we know there is in some of the neighboring states a deplorable laxity in regard to the requirements for those who shall be permitted to care for life and limb, and we do not know this to be the case in the provinces of this Canadian Confederation. In fact, many believe there is not such in any of the provinces. If there is any doubt on the subject,

let those who have authority—the Medical Councils—appoint one member each (the most exacting member) to form a committee which shall examine into the standing of the recognized colleges, and the requirements for the license in each province. If there be any laggards, let them be brought into line if possible. If all are up to the mark, let us march unitedly forward. If insurmountable difficulties arise, we can abandon or postpone the project, but let us at least make the effort to remove the little hedges that hem in our preserves.

We are glad to see that the Ontario Medical Association at its recent meeting passed a resolution unanimously approving of a principle of interprovincial registration, and another providing for the appointment of a permanent committee to aid in its furtherance, "said committee to continue in existence until interprovincial registration shall become an established fact." We trust that the various medical councils will cease to show the Chinese indifference to barriers which are even smaller than the great wall of China.

W. O.

Dr. L. F. Barker and Dr. Thos. S. Cullen, two well-known graduates, have done admirable work at Johns Hopkins Hospital, Baltimore. We are glad to be able to announce that George N. Morang & Co., of Toronto, are publishing two books from these able young authors: a work on the Nervous System by Dr. Barker, and a book on Cancer of the Uterus by Dr. Cullen.

THE CANADIAN MEDICAL ASSOCIATION.—As before announced the next meeting of the Canadian Medical Association will be held in Toronto, August 30th, 31st, and September 1st. Members who propose to present papers are requested to send titles of the same to the Secretary not later than July 15th. It is expected that there will be a large exhibit of pathological specimens, under the charge of a special committee, of which Dr. A. Primrose is chairman. We are not sure that the dates selected for the meeting are the most suitable in all respects, but we understand that they were fixed chiefly to suit the convenience of many eastern, as well as a certain number of western, members. Appearances at present indicate a large and successful meeting.

Personals.

Dr. J. J. Williams, of Lisle, was married to Miss Annie Perkins, June 7th.

The Sixth International Otological Congress will take place in London, beginning August 8th.

Dr. Bowditch, of Boston, while attending the Ontario Medical Association meeting, was the guest of Dr. N. A. Powell.

Dr. George Waters, who has been practising in Cobourg for thirty years, has gone for a trip to Europe.

Dr. H. J. Hamilton, of Toronto, went to Gravenhurst, June 24th, and remained a few days with Dr. Jas. E. Graham.

Dr. H. P. H. Galloway, Bloor Street, Toronto, has been elected a member of the American Orthopedic Association.

Dr. Jas. F. W. Ross, Toronto, attended the meeting of the American Medical Association, held in Columbus, Ohio, in June.

Dr. Price-Brown was elected a member of the Council of the American Laryngological, Rhinological and Otological Society at its recent annual meeting in Cincinnati.

Dr. Campbell Davidson, Externe Pathologist at the Montreal General Hospital, has given up the latter appointment, and has left for Vancouver to join the SS. *Tartar* as Surgeon.

William Mitchell Banks, M.D., F.R.C.S., who delivered the address in surgery at the Montreal meeting of the British Medical Association, received recently the degree of LL.D. from Edinburgh University.

Dr. Wilson, of Philadelphia, while in attendance at the recent meeting of the Ontario Medical Association in Toronto, was the guest of Dr. Allen Baines. He also spent a day at the Brookdale Trout Preserve at Uxbridge.

Dr. Simon Flexner, Professor of Pathological Anatomy in the Johns Hopkins University, has accepted the chair of General Pathology in the University of Pennsylvania, in succession to Dr. John Guit ras, who goes to Havana.

Dr. Donald Annom (Tor. '74) is still in London, England. He was recently elected a member of the Anatomical Society of Great Britain and Ireland. He was also a member of the Executive Committee appointed to aid in raising funds for University College Hospital by means of entertainments, and a member of the Executive Committee of the Hospital Convezazione held in June. He is still a Demonstrator of Anatomy at the University College Medical College.

Progress of Medical Science.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

Some Uses of Formaldehyde.

Mitchell, of Bradford, England, in *British Med. Jour.*, February 11th, 1899, gives a very interesting account of the successful use of formalin as escharotic in the removal of sarcoma of the jaw, a second recurrence and inoperable. He employed it to check hemorrhage from a fungating portion of the growth, which was fully as large as a man's fist. After applying solution of india rubber to protect the surrounding part he applied over the bleeding area a pad of absorbent cotton soaked in a formalin solution containing 20 per cent. formic aldehyde and carried it in with gutta percha tissue and a bandage. In twenty-four hours there was a necrosis of a quarter of an inch in depth. By constant repetition of the process he "eventually removed the tumor completely," using, of course, sharp spoon and scalpel every day for removal of dead tissue, and carefully leaving enough of the latter to avoid hemorrhage. The pain was pretty severe at times but easily controlled by nepenthe. After a few days' suspension of the use of the formalin a line of demarcation formed exactly like that in dry senile gangrene of the toes. The interesting communication ends with the following conclusions:

1. It is simple in the extreme, requiring no special apparatus, and can be applied without an anesthetic.
2. It produces no shock.
3. It does not, like electrolysis, set up a diffuse suppurative process, being not only aseptic, but powerfully antiseptic.
4. It is bloodless, and can be applied to very vascular growths, as this case shows.
5. It has very much greater penetrating power, and hence effects a more rapid removal than the usual escharotics, and its application does not like those give rise to a disintegrative or caustic process, with the resulting discharge, but is what I might term a necropoietic process, and with no discharge whatever.
6. As there is no discharge scarcely any dressing material is required, and an economy is thus effected.
7. During the paring away of the necrosed parts the macroscopic limits of such a tumor can easily be seen on the dry

clean-cut surfaces, and an indication is thus given as to the direction in which it is necessary to proceed further. The pieces removed can be subjected to microscopic examination for the same purpose.

8. Above all the process appears to be efficient and safe if care is taken.

The drawbacks are: (1) The pain, which is at times pretty severe, but can of course be relieved by an anodyne; and (2) the edema, which is always annoying, and might if extending to the glottis be fatal.

The systemic absorption of the formalin is apt to, and in this case did, produce an annoying general urticaria, thus showing its relationship to formic acid. There was at the same time a slight rise of temperature. The urticarial irritation was easily subdued by carbolic acid lotion.

The writer has never seen anything more satisfactory in therapeutics than the immediate and absolute control of hyperidrosis of the feet by formaldehyde. One peculiarly offensive and obstinate case, hereditary, too, it was, which was quite uncontrollable by chromic acid, permanganate of potash, etc., was at once cured, not of the malodorousness only but of the sweating, by nightly application to the feet of a ten per cent. watery solution. In *Merck's Archives*, March, 1899, F. E. Stewart, of New York, has a very useful account of some of its medical and surgical uses. He refers to the experience of Tretrop (*Bull. Gen. de Therap.*, lxx., p. 376) with it as a dressing to suppurating sores. The irrigations and dressings of formaldehyde rapidly check the suppurative process, and the author thinks that the use of the above solutions will exert a favorable influence in the treatment of a frequent complication of wounds—suppuration—the duration of which it noticeably shortens. In genito-urinary diseases its uses are many. In soft chancre as a local application in the ordinary liquid form it is as efficacious as pure carbolic acid. It is applied by means of cotton fastened to the end of a probe, and twelve hours afterward the ulcer becomes absolutely dry, the feel being that of a frozen surface. A single application is frequently sufficient to cause the chancre to heal. Cauterization with formaldehyde, as with carbolic acid, is said never to determine induration of the chancre.

In the treatment of gonorrhea in the female results obtained by Dr. Saret (*Medical Weekly*, lv., p. 297) are so favorable that he says that it ought to be employed in all cases of gonorrhea in women. Dr. Von Winckel, Professor of Obstetrics and Gynecology at the Medical Faculty of Munich (*Therap. Monats.*, No. 7), has found, in the course of treating 155 patients, that formaldehyde is an excellent remedy for gonorrheal vaginitis and

endometritis. In such cases, he has recourse to vaginal injections of a liquid containing a teaspoonful of liquid formaldehyde in a litre of water, and to cauterization of the cervix and intra-uterine mucosa with the same solution. In gonorrhea in the male Lamarique (*Mercredi Med.*, September 11th, 1895) speaks very highly of its value. For irrigation he uses a 1:500 solution; for instillations a 1:10 solution. The application causes a sharp but transient pain.

Other conditions in which most favorable results are reported are whooping-cough and diphtheria, in which either vapor or spray are inhaled, strength usually a 1 per cent. solution; atrophic rhinitis and ozena, in which dilute solutions, preceded by cocaine to prevent pain, will sometimes entirely control, not only crust formation but also odor. Solis-Cohen employs a solution containing from 1 to 10 per cent. of liquid formaldehyde, which he considers superior to any other remedy for the treatment of laryngeal tuberculosis, whether infiltrative, ulcerative, or vegetative.

T. J. Gallagher, of Denver, in cases of tubercular laryngitis, cleans with hydrogen dioxide, cocainizes, and applies from $\frac{1}{2}$ to 10 per cent. of formaldehyde. It shrinks vegetations, gives comfort, penetrates infiltrated tissues. If too strong it may cause dry gangrene.

J. M. Davidson (*British Med. Jour.*, No. 18,291, p. 143) speaks very highly of 1:2,000 or 1:3,000 solution in septic and infiltrated abrasions of the cornea. He claims that the severe pain of hypopyon ulcer is speedily relieved by solutions of that strength, and that they produce no irritation. Gessner (*New York Med. Jour.*, lxi, p. 727) has cured purulent ophthalmia with corneal ulcer in four days by washing the eyes every two hours with a 1-10th to 1-15th per cent. solution. The absence of poisonous properties, and great power of penetration to deeper tissues render it most valuable in all corneal inflammations of a suppurative type.

The following summary which appears in *Merck's Archives* for March, 1899, gives a general idea of the purposes for which formaldehyde has been employed as a therapeutic agent and the proportions recommended. It should be remembered, however, that the following proportions are those of absolute formaldehyde, and that $2\frac{1}{2}$ parts of the 40 per cent. solution should therefore in every instance, replace 1 part of formaldehyde as given below:

A solution of formaldehyde containing 1 part in 125,000 kills anthrax bacilli; 1 part in 50,000 prevents the development of typhus bacilli, etc.; 1 part in 25,000 forms a useful injection in leucorrhea, etc.; 1 part in 2,500 is said to destroy the most persistent micro-organisms in one hour; 1 part in 500 for the irri-

gation of catheters, etc., and as a mouth-wash; 1 part in 250 to 200, a general disinfectant solution for washing hands, instruments, etc., in surgery, spraying sick-rooms, and as a deodorant; 1 part in 100 in lupus, psoriasis, and skin diseases; 1 part in 50 to 25 sterilizes surgical catgut, silk, etc., by steeping.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Orexin in the Vomiting of Pregnancy.

Orexin was given in nine cases in $4\frac{1}{2}$ -grain doses in wafers. It gave relief in every case, usually after a few doses. The remedy was successful where other remedies had failed, and the relief continued even after the drug was discontinued.—*F. Hermann in the Therapist*, February, 1899.

Treatment of Leucorrhea with Argentamin.

A. G. Cipriani gives the result of the treatment of twenty-nine cases with this remedy. For ordinary washing out of the vagina he used solutions of 1:5000 or 1:4000, but for disinfection, solutions of 1:3000, 1:2000 or 1:1000. In simple leucorrhea due to inflammation of the vagina, irrigation of argentamin solution 1:1000 together with a strengthening diet, effected complete cure in nine cases. He had especial success in those cases of purulent and muco-purulent leucorrhea which so frequently occurs in little girls. In eleven patients argentamin solutions 1:3000 were successful, seven were completely cured, three almost cured, and one much improved. The treatment (*a*) decreased the discharge, (*b*) caused disappearance of pus, (*c*) improved the general health. Six cases of gonorrheal leucorrhea, four acute and two chronic, were completely cured in ten days. A solution of 1:2000 was used, and the patients kept under observation for some days after the disappearance of the discharge. In three cases of malignant growth the argentamin solutions lessened the discharges considerably.

Albuminuria and Lactation.

A mother's inability to nurse her child is recognized as a great misfortune; so also is anything that renders it improper for her to do so. Hence it is exceedingly satisfactory to learn that at a recent meeting of the Paris Obstetrical Society (*Progrès Médical*, April 1st) Dr. Budin and Dr. Chavanne reported the results of their extensive observations of women who,

although they had had albuminuria with their pregnancy, and in many instances puerperal eclampsia, nursed their children—satisfactory because it has been held that such women should not undertake lactation. Budin and Chavanne find that the children thrive and that the albuminuria promptly disappears.—*N.Y. Med. Jour.*

Kuestner's Abdominal Incision.

Dr. R. W. Westbrook reported (Brooklyn Surgical Society) his experience with the incision known as the suprasymphysal cross-incision of Kuestner, designed to avoid disfiguring scars of the abdominal wall after abdominal section. It permits of a moderate-sized opening into the lower abdomen for operations on the female pelvic organs.

The incision is a transverse slightly curved skin incision, with its concavity upwards, made a short distance above the symphysis pubis, and about three to five inches long. It is carried down to the aponeurosis of the abdominal muscles. This skin flap, with its fat, is then liberated with a few strokes of the knife, as far as possible in the direction of the umbilicus, and retracted and held by a temporary suture passing through its edge and through the skin of the abdomen above the umbilicus. A longitudinal abdominal incision in the middle line is then made as usual into the abdominal cavity, through the remaining layers of the uncovered area. This latter incision may measure two to three inches or more in length, and with suitable retractors allows of a fairly roomy opening. The wound may be closed with a running catgut suture to the peritoneum, a chromicized catgut or kangaroo-tendon suture for the muscular layer and aponeurosis, and a subcuticular suture of silk or silkworm gut for the transverse skin incision. The scar resulting on the abdomen is soon covered by the pubic hair, or is hardly visible in the natural skin folds of the lower abdomen. A small, simple dressing will cover the wound.—*The Brooklyn Journal.*

Gelatin Injections in Aortic Aneurism.

At a meeting of the Johns Hopkins Hospital Medical Society, in January last, Dr. Fletcher showed four cases of aortic aneurism treated by subcutaneous injections of gelatin solutions after the method of Lancereau and Huchard. The injections are always to be made at some distance from the aneurism. It was found that the two per cent. solutions of gelatin in normal salt solution, recommended by Lancereau, gave great pain, and subsequently one per cent. solutions, as recommended by Huchard, were used.

The first of Dr. Fletcher's cases had a saccular aneurism of the arch of the aorta. He unfortunately died of a perforation

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after receiving six injections, and at the autopsy, no deposit of fibrin was found on the walls of the aneurism.

The second had an aneurism of the descending portion of the aorta. He had then had twenty-eight injections (twenty are supposed to be enough for a cure). The pain and pulsation had been much diminished, and the patient had gained nineteen pounds in weight.

The third had received sixteen injections for an aneurism of the abdominal aorta, with no improvement.

The fourth had received twenty-one injections for a diffuse dilatation of the arch of the aorta. In three of these cases it was noted that the coagulation time of the blood was much reduced after the injection. Two hundred and fifty c.c. were given at each injection.

Book Reviews.

Practical Materia Medica for Nurses. With an Appendix containing Poisons and their Antidotes, with Poison Emergencies; Mineral Waters; Weights and Measures; Dose List; and a Glossary of the Terms used in Materia Medica and Therapeutics. By EMILY A. M. STONEY, Late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Massachusetts, etc. Philadelphia: W. B. Saunders. 1899. Pp. v.-306. Price, \$1.50. Canadian agents: J. A. Carveth & Co., Toronto.

This volume is intended to be a companion to "Practical Points in Nursing," previously published. It is divided into three parts: (1) General considerations and classification of drugs; (2) Subject-matter proper of lectures delivered to classes; (3) Poison emergencies, weights and measures, dose list, glossary, etc. It is in many respects simply a good epitome of a large work on materia medica, and is about as interesting as an ordinary dictionary. We believe that nurses will find it useful chiefly as a book of reference.

The Newer Remedies. A Reference Manual. By V. COBLENTZ, A.M., Phar. M., Ph.D., F.C.S., etc., Professor of Chemistry and Physics in the New York College of Pharmacy, etc. Philadelphia. P. Blackiston's Son & Co. 3rd edition, 1899, sent postpaid for \$1.00.

This is an exhaustive and apparently carefully made synopsis, referring only to remedies not found in the U. S. P., and giving information that pharmacists at any rate should possess,



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as to Synonyms, Sources, Tests, Incompatibilities, Medicinal Properties, and Doses. As an addendum there occurs an extended list of Animal Extracts of one kind and another, under the title "Organo-Therapeutic Agents." Even the reader who reads all his journals could hardly have been prepared for so enormous a list. The author does well to assemble for our edification such a congerie of what we are bound to characterize as therapeutic freaks and monstrosities. The cause of scientific medicine cannot possibly be helped by this particular development of physiological chemistry, and the useless length to which it has been carried never strikes one till he sees such a list as is here gathered together. The manual will scarcely perhaps replace Martindale's Extra-Pharmacopeia in our regard here in Canada.

The Medical Complications, Accidents and Sequelæ of Typhoid or Enteric Fever. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, Physician to the Jefferson Medical College Hospital, etc. With a special chapter on Mental Disturbances following Typhoid Fever. By F. X. DERCEUM, M.D., Clinical Professor of Diseases of the Nervous System in the Jefferson Medical College. Octavo, 267 pages, 21 engravings and 2 full-page plates. Cloth, \$2.40, net. Philadelphia and New York. Lea Brothers & Co., Publishers,

In the dedication of the book to Professor W. W. Kean, the author modestly refers to it as "An Essay." The subject is one upon which no careful physician even feels that he has read enough—and the plan of the work is attractive. It consists of seven chapters, with the following heads: General Considerations. Varieties of Onset. Aberrant Symptoms, States or Complications of the Well-Developed Stage of the Disease. The Complications of the Convalescent Stage. Conditions Which Ape Typhoid. Duration, and Immunity to Second Attacks. The Mental Complications. (Dereum).

This bill of fare is tempting and the cook is skilful. The bibliography is full, and would be very helpful to an investigator. As a repository of clinical facts the work is excellent. It seems to deserve a wide sale.

"What did the doctor pronounce your ailment?" inquired she, with a tremor of anxiety in her tone, as she came into her husband's sick-room. "He pronounced it as if it were spelled bronkeetus," exclaimed the indignant Bostonian, straightening himself up in bed, "and I requested him at once to make out his bill and go."—*Chicago Tribune*.

TRADE



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Dr.
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Dominion Analyst,
writes under date of
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Miscellaneous.

The numerous monasteries in Russia are to be turned into sanatoria for consumptives. The majority of the monasteries are situated in healthy regions and have spacious rooms, and are able to supply fresh milk, eggs, etc.—*Med. Age*.

SANMETTO IN ALL FORMS OF VESICAL DISEASES.—I have found the preparation known as Sanmetto a most excellent remedy in all forms of vesical diseases that have come under my observation, especially the cystitis attendant on the presence of stone before and after its removal, and also the vesical tenesmus from colds and urethral inflammation, both specific and non-specific.

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THE NOTIFICATION OF PHTHISIS IN MANCHESTER.—The Manchester Corporation have taken an important step in regard to the notification of phthisis within their jurisdiction. It has been agreed to make the disease a notifiable one, and to appoint a medical officer, at a salary of £200 per annum, whose duties will consist in visiting the notified patients at their homes, investigating the circumstances under which the disease has been contracted, and the conditions and arrangements of the infected houses. On the report of this official, steps will be taken to carry out the necessary measures of disinfection. It will be with much interest, doubtless, that the sanitary authorities throughout the country will watch the result of this new development in notification.—*Medical Press and Circular*.

“NO TEMPERATURE.”—Not infrequently, in reading the manuscripts of esteemed and valued contributors, whose professional attainments are beyond question, we find the expression “No temperature” in the description of the condition of a patient. Now, temperature is a property of all matter, living or dead, organic or inorganic. As patients (when not fictitious) are quite material beings, they must have a temperature, and so must their remains after death. Possibly the shades of the good have “no temperature”; as for those of the bad, we shall have to consult a Presbyterian minister before expressing an opinion on the subject. However, what our contributors evidently mean is that their patients had no abnormally *high* temperature, and therefore in such cases we take the liberty of adding the qualifying adjective.—*N.Y. Med. Jour.*

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The last issue of the REVIEW contained reports of several cases of poisoning from the use of Carbolic Acid.

IF JEYES' FLUID—or its medical form, Crenasol-Jeyes'—had been used, there would have been no poisoning to report on and discuss. The healing and disinfection that was wanted would have been obtained, but there would have been no chance of blood-poisoning.

JEYES' FLUID—and the medical form, Crenasol-Jeyes'—are proved to be more efficient as germicides and disinfectants than Carbolic Acid; they are used in a one per cent. solution, and therefore are much less expensive, and there can be no accidents where they are used.

The profession in Europe has found that Carbolic Acid has been replaced by the improved coal tar disinfectant, **JEYES' FLUID**; they realize that it is more efficient, free from danger, and less expensive.

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30 Hospital St., Montreal.

LOCAL APPLICATION.—It may not be generally known that in addition to its marked curative properties when administered internally, Tongaline produces no less beneficial effects when applied locally in certain conditions. Among the indications which call for the topical use of Tongaline are the inflamed joints of rheumatism, the enlarged articulations of gout and stiff and strained muscles from any cause whatever. In fact the internal administration of any one of the Tongaline preparations, as indicated, given at short intervals with copious draughts of hot water, may be supplemented by the local application of Tongaline Liquid. What is very important to note is that the same good results are invariably secured and the disturbing effects of internal medication upon an irritable stomach and sensitive nerves entirely avoided by the external use of Tongaline Liquid alone.

BISMARCK AND SCHWENINGER.—In his recently published brochure on the fatal illness of Prince Bismarck and the history of his medical relations to his illustrious patient, Dr. Schweninger omits all the most piquant passages of that story. No fewer than one hundred doctors had tried their skill on the Iron Chancellor, but without avail, as none of them could get their patient to comply with their prescriptions. "The difference," said Bismarck once, "between Schweninger and my former doctors lies in this, that I treated them, while Schweninger treats me." During his first consultation with his German Banting the Prince lost his temper and growled: "Don't ask so many questions." To which Schweninger replied: "Then please consult a veterinary surgeon; he asks no questions."—*London Chronicle*.

URETHRAL DISEASE AND MARRIAGE.—F. W. Robbins dwells emphatically upon two points in relation to this subject: the first is that we should know that a patient is cured before discharging him; when no gonococci have been discovered for two weeks, after repeated examinations; when no pus-threads or commas have been detected in the morning's urine; when the centrifuged urine shows no sediment containing gonococci, we have a right to say a patient is well; it is then better to allow the use of alcoholics to produce urethral congestion, and thus stimulate to action any lurking microbes. The second point is the advice so often given the patient to refrain from marriage for a year; such advice merely proves that there is still a fear that the patient is not free from disease; it is certainly preferable to have latent germs develop after the use of beer and champagne or instillation of silver nitrate solution before marriage, than after excessive intercourse after marriage. —*Medical Review*.

The Canadian Practitioner and Review.

VOL. XXIV.

TORONTO, AUGUST, 1899.

No. 8.

Original Communications.

PRELIMINARY COMMUNICATION ON THE SPREAD OF TUBERCULOSIS.

BY DR. WM. GOLDIE.

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Faculty's Bacteriological Laboratory.

For long one has been at a loss to explain satisfactorily why tuberculosis is not even more common than it is.

With dust-infection as the main cause of its spread, it has seemed a marvel that anyone could escape from the sputa-laden dust of our streets.

The very fact that so many escape, together with the general awakening to the importance of prevention, has led to further investigations, with highly important results.

Not only are we better able to appreciate the spread of tuberculosis, but also that of the infectious diseases such as influenza, diphtheria, etc.

Cornet has shown that it is very difficult to powder sputa so fine that it would remain suspended in the air for any length of time, and also that a very small percentage of guinea pigs caused to inhale sputa dust ever contracted tuberculosis.

It has also been stated, on experimental evidence, that bacilli-laden sputa, dried at room temperature, loses, after a varying length of time, all power of infection.

These statements, if true, would aid us in understanding the limitations to the spread of tuberculosis, but would not explain why association with consumptives should be more dangerous than sojourn in unwatered streets.

Answering this, Flügge has drawn attention to the fine

spray thrown out in the acts of coughing, and under his guidance students have demonstrated not only the presence of the bacillus tuberculosis in these droplets, but also that they are carried for long distances through the air, and cause infection. Others have confirmed and extended his experiments, showing that in the case of the guinea-pig infection takes place more readily from cough-spray than from sputa-dust.

The following experiments have been carried on in Toronto General Hospital as a test of the correctness of the above results, with the assistance of Dr. Sutherland and Mr Young:—

Method.—Patients with clinical history of progressive chronic pulmonary tuberculosis were selected and supplied with carefully cleaned glass plates, which they held six inches from the mouth during the act of coughing.

These plates were subsequently examined for the bacillus tuberculosis by staining with carbol fuchsin, etc., with the following positive results in any one set of plates:—

Results.—(a) Sixty per cent. for those used for twenty-four hours; (b) sixty per cent. for those used for twenty-four hours when cough was accompanied by expectoration; (c) thirty-three and one-third for those used for twenty-four hours when cough was not accompanied by expectoration; (d) twenty-eight per cent. for those used during a single act of coughing in the early morning; (e) fourteen per cent. for those used during a single act of coughing during the evening.

This shows the frequency with which the bacilli might be found in a single day, or in a single act of coughing, in the case of patients in whose sputa the bacillus tuberculosis could be detected. It is to be remembered, however, that the percentages only refer to the sets of plates, not to the patients. All patients in whose sputa the bacillus was found gave positive plates *at one time or another*; so constant was this that, in one, repeated negative plates led to the examination of the sputa for bacilli, with negative results, even when the centrifuge was used.

It is also worthy of note that in the case of coughing without expectoration only those patients gave positive plates in whom the sputa, when present, was thin.

The number of sputa droplets thrown out seems to depend more upon the *character of cough* than upon the consistence of the sputa. The films formed by these droplets are very easy to demonstrate, as they present a granular surface, such as might be formed by any albuminous fluid, and contain only leucocytes without a trace of stranded or thick mucus. Such film vary from 50μ to several mm in diameter. The bacilli occur in varying numbers; with a magnification of 1,000, one film with many leucocytes presented from 125 to 200 in the field.

The droplets coming from the saliva were also carefully examined, and only in the case of patients with very thin sputa were any bacilli found. To ascertain whether these droplets of saliva and those sprayed out in talking contained any bacilli worth taking account of, the washings of the mouth from well-marked cases were treated with a solution of KOH and centrifugalized and the sediment examined. Only cases with great quantities of sputa or thin sputa presented bacilli and these infrequently and very few in number.

Having demonstrated that the bacilli were thrown out in the spray, it remained to determine if such spray would remain suspended in the air for any length of time and be carried to any considerable distance. The air and dust of the laboratory having been found free from the bacillus prodigiosus, it was chosen to be made use of in the experiments, and plates containing agar medium were arranged around the room, from the floor to a height of five feet above it. After gargling and washing out the mouth with a culture of the bacillus prodigiosus, twelve coughs were given during the five minutes' exposure of plates. Other sets of plates were exposed at the end of five, ten and fifteen minutes, for five minutes each. On incubation *all* the plates showed a varying number of colonies. The greatest number were on those within ten feet of the cougher, and exposed during the first five minutes; the least were on those on the floor, exposed during the first five minutes, and on those farthest away at a height of five feet exposed for the last five minutes. Other trials demonstrated that any disturbance of the air increased the distance and the length of time at which infection might take place, while with the air still the distance depended upon the vigor of the coughing. Thus it would appear that during a single act of coughing a patient may throw out bacteria-laden spray, which will find access to all parts of any ordinary room. Beside the power of directly infecting while contained in the droplets, the bacteria must, without any injurious drying, be readily set free when the spray alights on carpet, curtains, or cloths, and mingling with the dust be the important factor in infection through each material. Droplets falling on clothing must be a frequent means of the spread of infection from one house to another.

Not only do we have the spray thrown out while coughing, but also in the acts of laughing, sneezing, talking and deep breathing. Trials conducted in the same way as in the case of coughing, demonstrated that plates to the distance of ten feet were infected while laughing, to the distance of six feet with loud talking, ordinary talking to the distance of three feet, while deep breathing seldom infected groups of plates even at a few inches. These facts are not of great interest as regards

tuberculosis, as the specific bacteria rarely occur in any number in the mouth, but they are of importance in connection with other infectious diseases and with the otherwise unaccountable infection of operation wounds. This means of infecting wounds is thought to be of such importance that in some hospitals the operators wear masks. It appears at first to be rather too refined a measure, but it must be remembered that it requires only a few hundred pyogenic bacteria to establish pus formation. The operator takes care never to let a drop of sweat enter the wound, then why should he run the risk of introducing the smaller but more heavily bacteria-laden drops of saliva. Experiment shows that during ordinary talking for two minutes, ninety droplets may fall in a four inch circle at a distance of eight inches, each of these droplets containing dozens to thousands of bacteria. Under normal conditions this may not be of much importance, as the bacteria able to produce suppuration are ordinarily few in number.

But should the operator have a tonsillitis or other inflammatory condition of mouth or pharynx, some means of protection, as, for example, the wearing of a mask, is imperative.

The results of further experiments will be published hereafter.

NOTES ON TREATMENT OF ECZEMA.*

BY GRAHAM CHAMBERS, B.A., M.B.,

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The first step towards the successful management of a case of eczema is to make a thorough examination of the patient with the object of determining the etiology and the course of the disease as well as the character of the lesions, with their distribution and evolution. The causes of the disease are both local and constitutional, and should be diligently sought for; otherwise the treatment must be more or less empirical. I may here mention a few generalizations which aid in determining the origin of the disease. As a rule symmetrical lesions are the result of irritants circulating in the blood and affecting the skin directly, or indirectly by their action on the central nervous system. On the other hand, asymmetry points to local origin. Lesions which increase in size by peripheral extensions are generally of parasitic origin, whereas rapidly appearing, widely distributed lesions are usually due to irritation—the result of some systemic disturbance.

Bacteria no doubt take an important part in the etiology of many cases of eczema, but in the majority of cases the causes of eczema are both multiple and multiform; and constitutional disturbances, such as a toxæmia, some affections of the nervous system, etc., assist the micro-organisms in irritating the skin. When bacteria are the principal cause of eczema, the primary changes are generally most marked in the epidermis, and the symptoms of inflammation—burning, itching, redness and swelling—are not well marked.

The course of eczema may be acute or chronic but frequently both conditions co-exist, as in many cases of chronic eczema where new acute lesions from time to time appear and old standing lesions become inflamed and then take on most of the characters of the acute disease. Again in many cases of eczema, the course is very irregular—at one time better, while at another time worse. The name, sub-acute eczema, is applied to this form. It is principally acute as regards appearance and symptoms, but chronic as regards time. Hence, in a skin disease such as eczema, the terms acute and chronic would be better applied to describe the character of the lesions rather than the length of time the disease has existed.

The treatment of acute eczema varies considerably with the form of the lesions and with the locality attacked, but there is one principle which forms the basis of treatment of all types of the

* Read at meeting of Ontario Medical Association.

acute disease, and that is to give rest to the skin as completely as possible. The local treatment should be directed to remove irritation, to destroy parasites, and to protect the inflamed surface from air and other irritants. All the crusts should be removed. They may be softened and loosened by the application of non-irritating oil to the patches. Pustules, if present, should be opened, and the surface washed once with a solution of boric acid or sprayed with a ten volume solution of hydrogenperoxide. Repeated washings with water are contra-indicated. Then a mild antiseptic astringent lotion should be applied. The writer has used for this purpose, during the last few years, a combination of black wash and calamine lotion, and cannot recommend it too highly, particularly in acute vesicular and pustular eczemas. It is made up as follows:—

R Hygrarg. sub-chlor. grs. xv.
 Zinci, carbonat. ℥ iv.
 Zinci, oxidi ℥ iii.
 Glycerini ℥ iss.
 Aquae calcis ad ℥ iv.—M.

Sig. : Apply frequently to affected parts.

This preparation is antiseptic, sedative, astringent and protective. Another remedy worthy of recommendation in vesicular and weeping eczemas is a saturated solution of picric acid. It precipitates the albumen and forms an artificial cuticle and is at the same time both sedative and antiseptic. However, picric acid is useless in acute dry eczemas, such as the papular and erythematous types. When the lesions are highly inflamed, I have usually found ointments and pastes, even when made as soothing as possible, to be more or less irritating, but as soon as the inflammation has subsided and lesions have become dry and scaly, then some form of greasy preparation is indicated and should take the place of the lotions. These should be slightly antiseptic, protective, and as emollient as possible. I have found Ihle's modification of Lassar's paste the best for this purpose. It may be prepared as follow :

R Resorcini grs. x.
 Pulv. amyli
 Zinci oxidi
 Lanolini
 Vaselini aa ℥ ii.—M.

Sig. : Apply to part two or three times a day.

There are several other formulae for good bases for pastes which I sometimes use in place of the above combination. I shall only give the formulae for three of them :

- (1) R Zinci oxidi
 Pulv amyli. aa ʒ ii.
 Ung. aquae rosae ʒ ss.—M.
- (2) R Zinci carbonat. precip.
 Pulv. amyli
 Lanolini
 Ung. aquae rosae aa ʒ ii.—M.
- (3) R Ung. zinci
 Pulv. amyli. aa ʒ ss.—M.

To each of these ten grains of boric acid, resorcin or of salicylic acid may be added.

This process of local treatment is generally all that is required to affect a cure in an acute case. In some cases where resolution appears to linger, half a drachm to a drachm of liq. picis carbonis, added to any of the foregoing prescriptions, will materially aid in effecting a cure. However, as the skin frequently turns greenish when a mixture of liq. picis carbonis and resorcin are applied, when the former is used, I substitute boric acid or salicylic acid for the resorcin.

The internal treatment of acute eczema is nearly as important as the local medication, as in the majority of cases there is some systemic disturbance. Here, as in the local treatment, rest to the skin should be the guiding principle in the treatment of the disease. Rest of mind and body are sedatives to the skin and should be secured as completely as possible. When the eruption is extensive, confinement to bed is a great aid in subduing the inflammation. Particular attention should be directed to the condition of the alimentary tract, for although the patient may not complain of any subjective symptoms, there is frequently some digestive disturbance, such as intestinal putrefaction. Regulation of the diet is of the greatest importance. The food should be of plainest possible character. Milk and Vichy water answers admirably in many cases. Hot drinks and stimulants are contra-indicated. The bowels should be kept regulated by the administration of saline aperients, such as Carlsbad salt, Glauber salts, etc. When the urine of the patient has a high sp. gr. and contains an excess of indican, the administration of 2 or 3 grains of calomel, combined with three or four grains of resin of jalapin will be found advantageous. This combination is not only a purgative and an intestinal antiseptic, but has also a diuretic action. How it increases the quantity of urine is not quite clear, but probably depends upon the action of the calomel upon the liver. In place of these remedies, I sometimes prescribe with advantage small doses of salicylate of sodium combined potassium bicarbonate and aromatic fluid extract of cascara sagrada. The activity

of the kidneys generally requires further stimulation and the remedy best adapted for this purpose is either potassium acetate or potassium bitartrate. When the blood pressure is high, as indicated by great arterial tension, cardiac sedatives are indicated. Malcolm Morris recommends wine of antimony for such cases. He advises that it be given in ten to thirteen minim doses every two hours for a few doses and then the dosage should be gradually diminished to five minims three times a day. I have tried this remedy in several cases and believe it to be a valuable agent in subduing the inflammation of the skin. Iron and arsenic are two remedies which, though useful in some forms of chronic eczema, are as a rule contra-indicated in the acute disease, as they both stimulate the formation of blood and as a result irritate rather than soothe the skin.

This method of treatment is usually all that is required to subdue the excessive irritation and produce sleep. However, some cases require additional sedatives, and then I am in the habit of using a mixture of codeine sulphate and potassium bromide.

When a patch of acute eczema has lasted for a few weeks, or when successive eruptions attack the same locality, there is always more or less thickening of the epidermis and true skin. Parakeratosis and epithelial growth (acanthosis) with more or less oedema of the mucous layer appear to be the primary pathological changes in the skin and are probably etiological factors in producing the increase of the connective tissue, the changes in form of the papillae, etc., of the corium. The term, sub-acute is applied to the eruption when there is a moderate amount of thickening, and inflammatory symptoms are present but not so marked as in the acute eczema. Many of these cases follow a very irregular course, at one time better, at another time worse, but remain in one locality for sufficient time to produce the amount of thickening of the skin which is frequently observed in the chronic disease. I apply the term chronic to long standing patches with markedly thickened true skin as well as to scaly patches with very little thickening provided there had been very little inflammation in the affected part. The so-called seborrhoeic eczema would also be included under the same heading, but in it the pathological changes are principally situated in the epidermis. Both types—sub-acute and chronic eczema—are frequently associated with the acute disease. Thus one meets frequently with patients who state that they have suffered from one or two patches of eczema for years, when the eruption extended to different parts of the surface of the body. This is an important consideration as the preliminary treatment in such cases is the same as in acute eczema. The treatment of sub-acute and chronic eczema is

more difficult than that of the acute eruption. It is difficult because it varies with the form of the lesions and with their distribution, as well as with the cause and length of course. Thus the treatment of erythematous eczema of the face is considerably different from that of a similar eruption in other parts of the body, and what will cure an eczema on the back of the hands will not usually be as effective with lesions on the palms. Both local and constitutional treatment are generally required. However, local treatment is all that is required to effect a cure in seborrhœic and other forms of the disease due to micro-organisms. It is also effective in some cases which were originally caused by some form of systemic disturbance which has ceased to irritate the skin, but the lesions remained for the want of good local treatment. Although the treatment of sub-acute and chronic eczema is subject to great variation with the change of locality, type of lesion, etc., still there are now certain generalized principles of treatment which I follow, and these may be varied to suit the locality, form of lesion, and irritability of the skin in each case.

I shall first describe the management of parasitic eczema, and then I shall briefly outline the general treatment which I consider the best in the other forms of sub-acute and chronic eczema. Parasitic eczema includes seborrhœic eczema, eczema marginatum and some other forms not well defined.

Seborrhœic eczema both in adults and in children may appear as a dry or moist-crusted eruption. However, the majority of cases of the crusted form are found amongst children. When the crusts are present the parts should be anointed for twenty-four hours and then washed with a solution of boric acid. Any form of soothing antiseptic paste, such as Lassar's :

℞ Acid salicylic
Zinc oxid.
Pulv amyli.....aa ʒ ii
Vaselini ʒ ss

is a good application at this stage. Sometimes there is a great amount of weeping, and in these cases I use for a few days the calamine-black wash lotion, but as soon as the excessive discharge has ceased, I apply the aforesaid paste. This answers best for infants, but in older children and in adults it frequently causes considerable matting of the hair, and then in place of paste I use an ointment such as the following :

℞ Resorcin
Sulphuraa grs. xv.
Ung. Zinci
Ung. Aquae Rosaeaa ʒ ss.—M.

As soon as the inflammation of the parts has subsided, stronger ointment of resorcin and sulphur may be ordered. Twenty grains each of resorcin and sulphur to an ounce of ointment base is generally sufficient. After this stronger preparation has been applied for a few days, the parts should be washed with soap and water and the ointment reapplied. Any common form of soap may be used in cases amongst infants, but spirits of green soap should always be used in cleansing eczematous patches in older children and in adults. Soap and water occasionally irritate the lesions too much, and hence as a rule should not be applied more frequently than every two or three days. This method of treatment usually rapidly brings about resolution, but if necessary the proportion of resorcin and sulphur may be increased. The treatment should be continued for some time after the skin appears normal as this type of eczema is particularly apt to recur.

Eczema marginatum is caused by the ringworm fungus and properly should not be placed with the eczemas. I have found a drachm of sulphur added to half an ounce each of zinc ointment and amoniated mercury ointment the best application.

Eczema mycoticum is the name applied by Hans Hebra to another form of parasitic eczema. It is characterized by very itchy moist crusted lesions which are generally situated on the flexor surfaces of the joints, scrotum or anal region. Hebra treats these cases by antiseptics, mild at first, but finally very strong, such as chrysarobin.

Eczema circumscriptum is another type of parasitic eczema which was first described by Crocker. It occurs most frequently below the knees and consists of patches of reddish papules which are sometimes so closely aggregated as to form scaly surfaces. Crocker treats these cases with success with mild antiseptic ointments.

There are probably other forms of parasitic eczema which up to the present time have not been defined. Nevertheless the treatment of these cases is likely to be correct, as the remedies—tar, resorcin, sulphur, mercurials, etc.—which have been found most useful in chronic eczemas, are also strong antiseptics.

A description of the local treatment of the non-parasitic cases of sub-acute and chronic eczema is beset with considerable difficulty, as the treatment is so variable with change in form of lesions. In order that my description may be more explicit I shall divide the work into four divisions :

(a) Local treatment of sub-acute eczema and of chronic eczema with moderate amount of thickening of the skin.

(b) Local treatment of chronic eczema, with great amount of thickening of the skin.

- (c) Local treatment of chronic pustular eczema.
 (d) Local treatment of eczema rubrum.

LOCAL TREATMENT OF SUBACUTE ECZEMA WITH MODERATE AMOUNT OF THICKENING OF THE SKIN.

The preliminary local treatment of these types is very similar to that of acute eczema. Any one of the emollient pastes referred to under the treatment of acute eczema is a suitable application. One drachm of zinc oxide added to an ounce of cold cream forms a most useful soothing ointment, and is at the same time an excellent basis for making stimulating ointments. The cooling effect of the ointment is no doubt due to the evaporation of the water incorporated in the preparation. The greater the proportion of water the more cooling the ointment. After these soothing applications have been applied for a short time, many of the patches will have disappeared while the others will appear less inflamed and generally improved in appearance but still scaly and slightly thickened. At this stage of the disease, stimulating ointments are indicated, but great care should be exercised lest the application be too stimulating. It is always best in these cases to commence with slightly stimulating ointments. Preparations containing tar generally give the most satisfactory results. Two formulæ which I frequently use are :

R	Liq. picis carbonis	℥ss to ℥i
	Zinci oxidi	℥i
	Ung. aquæ rosæ	℥i—M.
R	Ung. picis	℥ii
	Zinci oxidi	℥i
	Ung. aquæ rosæ	℥i—M.

These ointments should be thoroughly rubbed into the parts twice daily. When itching is a troublesome symptom, ten grains of carbolic acid added to either of the above preparations will be found useful. In some cases the ointment will be made more efficient by adding ten grains of ammoniated mercury or 30 grains of calomel.

LOCAL TREATMENT OF CHRONIC ECZEMA WITH GREAT AMOUNT OF THICKENING OF THE EPIDERMIS.

The patches in these cases are generally dry and marked here and there with angry looking fissures. The palms of the hands, the soles of the feet and the lower extremities are the localities most frequently attacked. This type of the disease is generally referred to as eczema sclerosum or eczema keratodes. In some cases, particularly on the lower extremities, the patches

have a warty appearance and then the name *eczema verrucosum* is applied to the eruption.

The first indication in the treatment of this type of *eczema* is to heal the fissure and to get rid of the thickened epidermis. I usually commence the treatment by prescribing some emollient ointment such as equal parts of zinc ointment and cold cream or

℞ Ung. diachyloni ℥ vi.
Ung. aquæ rosæ ℥ ii.

This somewhat softens the parts and heals the fissure. For the removal of the thickened epidermis no remedy gives such satisfactory results as a salicylic acid plaster. Five per cent. of the acid is generally sufficient, but in old standing *eczemas* of the palms of the hands or soles of the feet ten per cent. is required. A good five per cent. plaster may be made as follows:

℞ Acid, salicylic
Ol. olivi aa grs. xxiv.
Emplastri saponis ℥ i.—M.

There is no need of olive oil in the preparation when ten per cent of salicylic acid is used. By means of a warmed spatula this plaster should be spread on linen and carefully applied to the part and left in position for two or three days. The plaster should then be removed when it will be found that considerable of the excessive epidermis will be carried away, and much more can be readily removed by washing the part with soap and water. In the case of the palms and soles, the skin may be rubbed with a pumice stone or scraped with a curette. If the overgrowth of epidermis is not removed by this procedure, the plaster should be re-applied. When the patches have been thinned down, the skin will appear more or less red and very sensitive to the patient. In some cases, particularly on the lower extremities, the bleeding points of the hypertrophied papillæ will be exposed to view. At this stage milder remedies are indicated. Ten grains of salicylic acid to one ounce of diachylon ointment is an excellent application to the palms of the hands and soles of the feet, but in cases where the lesions were situated on the lower extremities, I have found a jelly such as the following the best application :

℞ Ichthyol grs xxxv
Gelatin
Glycerin aa ℥ vi.
Zinc oxidi ℥ iss.
Aquæ ℥ ii.—M.

This combination should be dispensed in a tin box in order that it may be readily melted before being used. The melted jelly should be applied with a brush and then covered with a

thin layer of cotton. Every two or three days the parts should be bathed in hot water, when the dressing can be easily removed. A new application of jelly should be again applied.

This method of treatment should be followed as long as resolution progresses, but if at any time the patches should tend to revert to the thickened condition the salicylic acid plaster should be re-applied.

LOCAL TREATMENT OF CHRONIC PUSTULAR ECZEMA.

The treatment of this type of eczema is usually very satisfactory. The first indication is to remove the crusts. The parts should be annointed with oil for twenty-four hours and then washed with a saturated solution of boric acid. An antiseptic ointment should then be applied. I have found the following combination the best for the purpose :

R Ung. hygrarg. ammon.
 Ung. zinci oxidi
 Ung. aquæ rosæ..... ℥ ii.—M.

If any thickening of the epidermis remains after the lesions are free from pus and have become dry, and if the diseased skin does not tend to resolve, then other mildly stimulating ointments, such as used in the treatment of subacute eczema, should be tried.

LOCAL TREATMENT OF ECZEMA RUBRUM.

I apply the term eczema rubrum to chronic infiltrated patches varying in color from deep red to pink, from which the outer layers of the epidermis are continually being cast off in the form of scales or crusts. The lesions may be either dry or moist. The excessive exfoliation of the epidermis is due to a soddened condition of the mucous layer. The eruption of eczema rubrum may appear upon any part of the surface of the body but is generally situated on the lower extremities.

In cases of moist eczema rubrum the first indication for treatment, is to convert the lesions into the dry form and to bring about a partial natural cornification. For this purpose the calamine-black wash lotion acts excellently in the majority of cases. A solution of nitrate of silver in spts. ether, nit, (grs. xv to ℥ i) is also a good application, particularly when there is considerable oozing from the lesions. Rest in bed with elevation of the affected parts will also aid in reducing the redness of the skin. When very little serous exudate remains, then soothing ointments or pastes should be used. Ihle's paste would be a suitable application. When the patient is not at rest in bed, the legs should be bandaged from the foot upwards. This holds the dressing in position and at the same time supports the

vessels. As soon as the hyperæmia diminishes, mildly stimulating ointments may be used. In fact the local treatment becomes the same as that of a similar condition under the foregoing types.

THE INTERNAL TREATMENT OF SUB-ACUTE AND CHRONIC ECZEMA.

When the lesions are inflamed and the patient complains of burning, itching, etc., the preliminary internal treatment should be the same as that of acute eczema. As soon, however as the inflammation of the parts subsides, and the lesions assume a typical chronic type, then in many cases additional internal medication is required. When the patient is anæmic and debilitated, I generally use the following combination, which is a modification of Startin's mixture :

R Mag. sulphatis	℥ ii.
Ferri sulphatis	℥ ss.
Acidi sulph. dil.	℥ iv.
Liq. strychnin.	℥ i.
Glycerin.	℥ iv.
Aquæ	ad ℥ vi.—M.

Sig : ℥ ii in water after meals.

With this mixture I sometimes combine one or two drops doses of Fowler's solution ; but arsenic should only be prescribed for chronic, scaly or papular patches in which there are very slight signs of inflammation. Cod liver oil is a very useful drug and food in many cases. I have found it most useful in strumous children and in adults in whom the rash has a tendency to become general and takes on the appearance of exfoliative dermatitis.

A careful examination of the condition of the stomach, intestines and kidneys should always be made in every case of non-parasitic chronic eczema, for although a cure may be effected by local treatment, still the disease is apt to recur provided the faulty condition of these organs is not removed.

In examining the urine of eczematous patients I always pay most attention to the quantity in 24 hours, total solids, and the amount of indican. When the urinary secretion is scanty, I always give alkaline diuretics, such as potassium acetate. The following mixture answers admirably in many cases :

R Pot. acetatis.	℥ iv.
Tinct. nucis vom.	℥ iv.
Ext. euonymi. fl.	℥ vi.
Aquæ.	ad ℥ iv.—M.

Sig : ℥ ii in water before meals.

When an excess of indican is present in the urine, I give one or two drachms of sulphate of sodium in a glass of hot water every morning as well a fairly large dose of calomel every three or four days. The internal administration of 10 grain doses of ichthyol before each meal does good in some of these cases, particularly when the eczema is of the erythematous type. The treatment of the gastric and intestinal symptoms should be adapted to the pathological condition in each case. A test meal followed by an analysis of the expressed stomach contents gives valuable information in many cases. It should always be administered in inveterate cases, even when the patients do not complain of any subjective gastric symptoms. The diet is always of the utmost importance. A light diet of milk, farinaceous articles, tender vegetables, with a limited amount of fish and fowl, is, as a rule, the most useful for the purpose.

ETIOLOGY AND DIAGNOSIS OF CEREBRO-SPINAL FEVER.*

BY WILLIAM OSLER, M.D., F.R.S., F.R.C.P.

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In practice we sometimes meet with a meningitis which is not a sequel to pneumonia or ulcerative endocarditis, to ear disease or of injury, and which does not mark the terminal stage of a chronic malady. As the meninges of brain and cord are both inflamed the condition is labelled cerebro-spinal meningitis. When there are many cases we speak of epidemic cerebro-spinal meningitis. Until recently my experience did not extend beyond the sporadic form of the disease. However, the recurrence of a small outbreak in Baltimore during the past year has enabled me to study certain points in this most interesting affection, and has thus determined my choice of a subject upon which to address you.

Of the special features of epidemic cerebro-spinal fever I shall speak but briefly.

First, it is one of the most fatal of all acute diseases, but fortunately takes a low position among destructive epidemics. It spreads slowly and attacks only a few individuals so that the general mortality may be but slightly increased. On the other hand, scarcely any known fever kills so large a proportion of those attacked. During the recent Boston epidemic out of 111 hospital cases no less than 76 died.

Secondly, the outbreaks occur in epidemic waves, of which

*Read before the West London Medico-Chirurgical Society, June 10th, 1899.

the fourth in the present century is now prevailing in the United States. For some years there have been local outbreaks in widely-separated regions, but in 1896, 1897, and 1898 a slight epidemic occurred in Boston, and in 1898 cases appeared in Baltimore and other towns. From a recent report by Surgeon-General Wyman we find that cerebro-spinal fever has prevailed during the past year in twenty-seven States.

Thirdly, among specific diseases cerebro-spinal fever comes closest to pneumonia. Sporadic cases of both occur during epidemic periods, although more commonly so in pneumonia, while both are most frequent in barracks, gaols, and asylums. Even when not epidemic there may be remarkable house outbreaks of cerebro-spinal fever. The seasonal relations are the same in both, and the two diseases may prevail together. Other points of resemblance are found in the abrupt onset, the herpes, the almost identical character of the fibrino-purulent exudate, as pointed out by Netter, and the frequent complication of pneumonia by meningitis, and of the latter by pneumonia. The degree of contagion is about the same in both diseases, and it has been claimed that the organism described in cerebro-spinal fever is only a degenerate variety of the pneumococcus.

On the other hand, Lichtensten urges against the view that pneumococcus is the cause of epidemic cerebro-spinal meningitis, the facts that pneumonia is of universal distribution, whereas the other condition is very rare, and in some countries still unknown. Croupous pneumonia attacks every age, and somewhat more so with increasing age, while epidemic meningitis chiefly affects children and young persons. Pneumonia has a typical course and crisis: epidemic meningitis has no crisis. The complications also differ.

THE BACTERIOLOGY OF CEREBRO-SPINAL FEVER.

More than twelve years ago Weichelsbaum described a diplococcus with special cultured peculiarities, which he claimed to be the specific organism of the disease. In 1895 his observation was confirmed by Jaeger. No mention, however, was made of the fact in Allbutt's System, published in 1896, or in Lowne's and Thompson's System in 1897. Weichelsbaum has been confirmed by Heubner, Councilman, Mallory, and Wright, and the organism, known as the meningo-coccus, or the diplococcus intracellularis meningitidis, is now regarded as the specific cause of the malady. The subject is fully discussed by Netter in Vol. XVI. of the "Twentieth Century Practice." My own cases have been carefully investigated by my colleagues, Drs. Gwyn, Harris, and Welch. The meningococcus in coverslips from the exudate is usually a diplococcus lying within the polynuclear leucocytes; hence the term intracellularis. It may also occur

free. It is stained with the ordinary reagents, and is discolored by Gram's method. It grows best on Loeffler's blood serum, on which it forms round, whitish, shining, viscid-looking colonies, with smooth, sharply-defined outlines, which contain a diameter of 1 to $1\frac{1}{2}$ millimetres in twenty-four hours. It is found in the cerebro-spinal exudates, and has been rarely isolated from the blood, pus from joints, pneumonic areas in the lungs and nasal mucus.

Our clinical and pathological experience with the organism is as follows:—In twenty-one cases which I have seen lumbar puncture was made in sixteen. In three cases seen in consultation the diagnosis was so clear that puncture was not made. In cases 1 and 2, both mild, the puncture was made, one on the sixth and the other on the seventh day, but no organisms were found. In cases 3 and 4, admitted late in the disease, it was not thought necessary to perform it. Of the remaining fourteen cases, in thirteen the *diplococcus intracellularis* was present on coverslips and in cultures. In the fourteenth case its presence was doubtful on the coverslips, but the *staphylococcus* was found in culture. Of the five autopsies the *diplococcus intracellularis* was present, and two had been found during life. In one the *streptococcus* and in another the *staphylococcus* was isolated.

MICROBIC ASSOCIATION IN CEREBRO-SPINAL FEVER.

It is interesting to note that the *diplococcus intracellularis* is often found to be not in pure culture. In the Boston epidemic other organisms were often found, particularly in lumbar punctures taken in the course of the disease. In a large number of Netter's cases the *pneumococcus* was present. In our own series it was found only once in the fluid obtained by lumbar puncture. Another point in diagnosis is that after five or six weeks or longer the *diplococcus intracellularis* often disappears. The chief organisms found in association are the pyogenic organisms, the *pneumococcus*, and rarely, the *tubercle bacillus*.

On the whole, then, our observations support those of Weichelsbaum, Jaeger, Councilman, and others, that in epidemic cerebro-spinal fever there is an organism with special cultured peculiarities which may reasonably be regarded as the exciting cause of the disease. Among recent observers, Netter alone appears to doubt this, and says that he found the *diplococcus intracellularis* in 16 only out of 39 cases, and in 10 of those the *pneumococcus* was present at the same time.

Netter's position is illogical and confusing. In his article in the "Twentieth Century Practice" he assumes that cerebro-spinal fever may be caused by either the *pneumococ-*

cus or the diplococcus intracellularis. That a cerebro-spinal meningitis may be due to the pneumococcus is everywhere acknowledged; but it is unlikely that so specific an affection as cerebro-spinal fever should be caused by two different organisms. Towards the close of the article the inconsistency of this view seems to impress him, for he says, "certain peculiarities prevent us from concluding that the two diseases are absolutely identical."

THE DIAGNOSIS.

In cerebro-spinal fever the disclosures of the *post-mortem* room are just as mortifying as in pericarditis. Who has not in enteric fever or pneumonia made an absolute diagnosis of meningitis, only to illustrate the dictum of Stokes that there is no single nerve symptom which does not and may not occur independently of any lesion of brain, nerve, or spinal cord? It is very doubtful if either tuberculous or pyogenic organisms cause an acute primary cerebro-spinal lepto-meningitis.

The onset of the disease is peculiar. As a rule it is more abrupt than that of any other known disease, with the possible exception of pneumonia. The patient may be seized when at work or during sleep; he has rigors or chill. This onset is very different from that of the tuberculous form. In sporadic cases of cerebro-spinal attacks there may be no fever at first. (Various charts illustrating the peculiarities of temperature were here shown on a lantern screen.) In two cases there was no elevation of temperature for three days, then the curve ran up suddenly to 104 degrees or 105 degrees. Another chart showed extreme fluctuations from about normal to 106 degrees and 108 degrees (the latter preceding death.) In another less common type the fever was continuous, resembling the third week or recovery stage of enteric fever. In one case regarded as typhoid the diagnosis of cerebro-spinal fever was established by lumbar puncture. One protracted case showed extreme irregularity, and at one time an inverse type of temperature—that is to say, a morning record higher than that of the evening. In some the fever is of a remarkably intermittent nature. It differs, however, from the paroxysms of intermittent fever in extending over twenty-four hours, whereas the intermittent periodicity occurs every twelve hours.

KERNIG'S SIGN.

This interesting sign, first described by a Russian physician, has been present in all our cases in which it has been looked for. It is an old observation that in protracted meningitis the patients lie with the thighs flexed upon the abdomen and the legs partly flexed on the thighs. To test for Kernig's sign, the

patient should be propped up in bed in the sitting position, then, on attempting to extend the leg on the thigh there is contraction of the flexors which prevents the full straightening of the leg. On the other hand, in the recumbent posture the leg can be fully extended. Many patients with meningitis cannot sit up, but the test can be equally well applied by flexing the thigh on the abdomen, when, on attempting to extend the leg, if meningitis be present, the limb cannot be fully extended. Fries found the sign in fifty-three out of sixty cases, and Netter in forty-five out of fifty. Its presence is no indication of the intensity of the spinal involvement. Netter's explanation of the phenomenon is as follows: In consequence of the inflammation of the meninges the roots of the nerves become irritable, and the flexion of the thighs upon the pelvis when the patient is in the sitting posture elongates, and consequently stretches, the lumbar and sacral roots, and thus increases their irritability. The attempt to extend the knee is insufficient to provoke a reflex contraction of the flexors while the patient lies on his back with the thighs extended upon the pelvis, but it does so when he assumes a sitting posture."

LUMBAR PUNCTURE.

By means of Quincke's lumbar puncture we can now say when a meningitis exists and are further able to determine the form of disease. The technique of the operation is fully described in the text-books. It is a simple, harmless procedure, and in most cases can be undertaken without general anesthesia, or with the aid of a local freezing mixture. The puncture is usually made between the second and third vertebrae, and is done with an ordinary aspirating needle. Often a few drops of blood flow first, then a clear or turbid fluid. A dry tap is unusual in cerebro-spinal fever. The needle may be plugged, or may be in contact with a nerve. In rare cases clear fluid may be obtained when meningitis exists, and in a protracted case the fluid may be turbid at one puncture and clear at the next. A clear fluid may be obtained from a puncture in the second lumbar interspace, while lower down a turbid fluid may be withdrawn. In a recent *post-mortem* the fluid in the dorsal and upper lumbar regions was clear, while that in the lower lumbar and the sacral was turbid and flocculent. The amount of fluid varies from a few drops to a large amount—*e.g.* 126 c.c. Cover glass preparations can be made at once, and cultures prepared by running a few cubic centimetres of the fluid on to a shunt tube of Loeffler's blood serum.

Has the lumbar puncture any therapeutic value? Williams, of Boston, thought it had, but Wentworth takes a contrary view. Netter reports some good results. We have given this point

careful attention. In one chronic case the patient lingered three months. Seventeen punctures were made in all between the twenty-ninth and the seventy-fifth days of the disease, and of these fourteen were positive. A turbid, pale yellow fluid was removed at each effective tapping. On five occasions 100 c.c. or more were obtained, once 125 c.c., and 126 c.c. After the first two effective tapplings the patient seemed better, the ten punctures dropped and he seemed much brighter, but he soon became worse, and the fever rose. Following the sixth, seventh, eighth and eleventh punctures the temperature fell 4.5 degrees, 3.8 degrees, 4.2 degrees, 5.8 degrees. The drop in the fever followed so directly that it seemed only natural to attribute it to the lumbar puncture. The thirteenth puncture, however, was negative, yet the temperature fell 5.1 degrees, and after the fourteenth tapping the temperature rose 2.6 degrees. Evidently not the withdrawal of the fluid, but the peculiar character of the disease was responsible for the remission. The *diplococcus intracellularis* was found twice.

SPORADIC CEREBRO-SPINAL FEVER.

To what extent do isolated cases of cerebro-spinal fever occur between the epidemics? What is the nature of the primary suppurative meningitis which is met with from time to time in all communities? Neither hospital statistics nor the ordinary death returns give any trustworthy information as to these questions.

From the Fifty-ninth Annual Report of the Registrar-General, 1896, I gather that the deaths from cerebro-spinal fever in England from 1877 to 1896 inclusive, have only once exceeded 50 per annum. There has been a great reduction in the return since 1897, 233 cases for the ten years ending 1896, against 406 for the previous decade. In Scotland there were only six deaths from cerebro-spinal fever in 1895, and five in 1896. In Ireland there were 76 deaths from this cause in 1896, and the same number in 1897.

In the United States and Canada the occurrence of sporadic cases in the intervals between the epidemics has long been recognized. In Philadelphia, from 1863 up to the present date, a record has been made by Stillé, Pepper, and Abbott. They show a gradual decline from 1884, when there were 124 deaths, to 1891, with 23 deaths. From 1892 to 1897, the deaths were 22, 35, 18, 17, 7, 10; 1898, 24 cases; while in the first four months of the present year there were no less than 89 deaths,

At the Johns Hopkins Hospital in the spring of 1898 there were four cases of sporadic cerebro-spinal fever; the first of the epidemic cases.

One family presented the following history:—(1) a young

man, aged 20, returned home with a terrible pain in the head. He had fever and vomiting and his head and neck were arched. He was delirious and died in five days; (2) a sister who had nursed her brother died in four days; (3) a second sister taken ill and recovered; (4) the mother worn out with nursing her children, attacked and died in two days. These were five cases of sporadic form in one family. The disease was not epidemic in the city.

BACTERIOLOGY OF SPORADIC CEREBRO-SPINAL FEVER.

In a number of sporadic cases the organism of Weichelsbaum has been found. The most important contribution of late years has been made by Dr. Hill, of the Great Ormond Street Hospital for Children. In a study of the simple posterior basic meningitis of infants he isolated from seven or eight cases a diplococcus conforming in every respect with the diplococcus intracellularis. In ten years there were forty-nine different cases of the kind at the hospital mentioned. Clinically the disease differs from the ordinary type, as it attacks young children and is very protracted. Skin rashes are not frequent. Still was able to isolate the diplococcus from the periartritic exudates.

By the kindness of Professor Welch the results of the twenty-five cases in our own city in which bacteriological examination has been made may be here given. There were six of cerebro-spinal fever, eight of pneumococcic meningitis, seven of pyogenic meningitis (in which streptococci and staphylococci were found together and separately), and four showing unidentified bacilli.

The pyogenic forms of meningitis do not concern us here; no case of primary streptococcus or staphylococcus came to autopsy. I have already referred to the chronic form of cerebro-spinal fever in which the pyogenic cocci may alone be present at the time of death.

PNEUMOCOCCIC MENINGITIS.

The pneumococcus has long been recognized as the most important organism in the production of meningitis, and the first question is how sporadic cases of cerebro-spinal meningitis are due to it. Of twenty-five cases in the Johns Hopkins Hospital it was isolated in eight. Of twenty cases examined by Councilman, Mallory, and Wright, it was primary in two and secondary in eight. Netter examined sixty-one cases of meningitis bacteriologically, and found the pneumococcus thirty-five times, the same with streptococcus once, and once with staphylococcus, the intracellularis three times. We may consider three groups of pneumococcic meningitis.

1. The meningitis as a complication of lobar pneumonia. In Montreal my attention was called to the frequency of this complication in eight of one hundred consecutive autopsies. The other groups are pneumococcic meningitis from local infection, and primary pneumococcic meningitis.

The clinical features of pneumococcic meningitis present many points of interest. Is the case one of cerebro-spinal fever with pneumonia, or of inflammation of the lungs, with an added meningitis? This question does not often arise at the bedside, as it is most exceptional for the meningitis of pneumonia to present the symptoms of cerebro-spinal fever, and in doubtful cases the lumbar puncture will settle the matter. The age of the patient is important. In meningitis complicating pneumonia all the cases were above the twentieth year, a striking contrast to cerebro-spinal fever, in which a large portion are under twenty. A second point is the latency of pneumonia, which is more often recognized in the deadhouse than in the wards. Netter states that fully one-half of the cases are latent. Headache and early delirium are present in all cases, owing to involvement of cortex. On the other hand, the mind may remain clear throughout the cerebro-spinal fever. Spinal symptoms are rare in the meningitis of pneumonia. The importance of lumbar puncture cannot be too strongly emphasized. In a case of pneumonia in the wards of cerebral symptoms, the puncture showed the pneumococcus in the exudate. Lastly, an important point is that meningitis complicating pneumonia is almost always fatal. Personally I have never seen recovery under these conditions.

Secondary meningitis from local infection from nose, ear, etc., is often of pneumococcic origin.

Primary pneumococcic meningitis exists, and is abrupt in onset. The most important point to be determined is the exact proportion of primary cerebro-spinal meningitis due to pneumococcus intracellularis.

TREATMENT.

In our cases no special drugs were used. Morphia was given to check pain, and sponging practiced to reduce temperature. Our mortality has not been very great when we consider the severity of the cases. Thus eight cases died out of eighteen in hospital, and nine among the twenty-one I have seen. A distinguishing feature is the relief of pressure by withdrawal of cerebro-spinal fluid.

In two of our cases the spinal canal has been opened, drained and irrigated. So far as I know, an extensive laminectomy had not been done for acute spinal meningitis until our first case on November 6th, 1898, was operated upon by Dr. Cushing. The

spinal canal was thoroughly irrigated with salt solution and a quantity of purulent exudate washed out. No change followed in the existing paraplegia. The bladder and kidneys became infected, and the patient died two months after the operation. At the autopsy spinal meninges were smooth and looked normal. It was impossible to say where the dura mater had been incised, and there were neither adhesions nor thickening of the pia-arachnoid.

In another case laminectomy was performed on the fourth day by Dr. Cushing. A catheter was passed beneath the dura mater, and the membranes drained and irrigated. For several days the patient seemed better, but he developed a hemorrhagic cystitis, and died on the sixth day after operation.

Dr. Musser, of Philadelphia, has also had an unsuccessful case. In England Dr. Rodleston, and Mr. Herbert Allingham have reported a case of sporadic cerebro-spinal meningitis, in which the patient recovered after laminectomy and drainage. The operation, which has been adversely criticised in some quarters, seems to me justifiable in severe cases, where the spinal symptoms are very marked, on the principle of a desperate remedy for a desperate disease.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Diagnosis of Cocaine Addiction.

Dr. Stephen Lett, Homewood Retreat, Guelph, in the *Quarterly Jour. of Inebriety*, gives the following as the symptoms of the cocaine habit:—At first there is great buoyancy and self-confidence. There is increased mental and physical activity. Wakefulness, loss of appetite and ability to do without food come on. The eyes are bright and glistening, with dilated pupils, not contracting under stimulus of light. The secretions are not lessened as in opium addiction, but rather increased. As the habit goes on, the amount of the drug must be increased, or the person suffers from intense physical and mental depression, leading to agitation, fear of death and lachrymosis. Nutrition begins to fail, accompanied by emaciation, anemia, sunken eye-balls, prominent cheek-bones and general pallor. Later on hallucinations and delusions appear. Persons are taken for enemies. The *habitué* collects all sorts of arms in his room for protection. His room is barricaded to prevent imaginary enemies taking him away. There is an intense feeling of worms under the skin. When the hypodermic syringe is used the skin becomes hard, thickened and discolored.

Antistreptococcic Serum in Smallpox.

Dr. W. J. Lindsay, medical health officer for Middlesbrough Isolation Hospital, *Brit. Med. Jour.*, May 13th, remarks that, during a recent epidemic of smallpox, he had the opportunity of treating all varieties of the disease. He noticed that medicinal treatment had no influence on the disease. He further noticed that the date of pustulation usually marked a period in the disease when the patients became much worse. Further, that many had abscesses and went through an illness similar to chronic pyemia. He decided to try the antistreptococcic serum, with a view of checking the pustulation. For this purpose the patient was given 10 c.c. for three days, beginning on the date of pustulation. The treatment was certainly of much value. The critical period was shortened, the tendency to heart failure lessened and the severity of the toxemia greatly abated.

The Functions of Suprarenal Glands.

Dr. A. G. Auld, of the Physicians' and Surgeons' Laboratory, London, *Brit. Med. Jour.*, June 3rd, calls attention to some experiments on cats and dogs with the view of further clearing up the function of suprarenals. When only one gland was removed, the animals remained well for months. After some months, the removal of the second gland caused death in twenty-four to thirty-six hours. The animal lies on its side in a state of intense weakness, and is very drowsy, refusing to move, and may have convulsions. When one gland was removed for some time, there was not any enlargement of the second one; but there was considerable enlargement of the spleen, and very marked increase in the size of the thymus gland. He is of the opinion that the function of the glands is rather that of separating poisons from the blood than the formation of a secretion.

Summer Complaint in Children.

Dr. Louis Fischer, New York, in *Med. Record* for June 17th. states that in the treatment of cases of the above disease the following points should be borne in mind:—Irrigation of the stomach is of much importance. This should be done with tepid water containing a little common salt, and enough used to render the return flow clear. The diet is of greater importance still. The diet the child was receiving when the attack came on must be withdrawn. If it was being fed on milk, barley, rice, farina, starch, or sago, water must be given instead. The external application of cold water, if the temperature be high, or that of warm water, if there be collapse, is useful. Cold affusions to the spine are valuable if there be much fever. The removal of all unnecessary clothing is gratifying to the child.

Insanity Defined on the Basis of Disease.

Dr. C. H. Hughes, in the *Alienist and Neurologist* for April, urges the connection between physical disease and mental derangement. Hippocrates, Galen, Connolly, Combe, Ray, Esquerol, and many others, have enunciated the doctrine of physical disease at different times. Maudsley gave medical men something tangible for the phenomena which we call insanity. The brain must be in good physiological condition for the expression of mind in a normal and healthy manner. When the mind is expressed in a pathological manner it is only following the laws of other diseases, and indicates that the organ of the mind is diseased. In insanity there is primarily or secondarily disease of the brain.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

The Prevention of Premature Old Age.

Hermann Webber (*Ztschr. f. Diätet. U. Physik. Therap.*) discusses this subject and draws the following conclusions:—Early senility of the nervous system is seen principally in the male sex, and is due chiefly to cardiac and arterial degeneration. It is frequently hereditary, and therefore treatment should be commenced early in life. Moderation in eating, in the use of alcohol and of tobacco, and in the sexual functions, is necessary. Everything conducive to good spirits should be enjoined, some mental occupation should be followed, and upon retiring from business some “hobby” should be indulged in. Bodily activity in the open air is also indicated, but fatigue should be avoided. From puberty to fifty years of age eight hours out of the twenty-four are sufficient for sleep, and after that five or six hours only are necessary. Early rising and regularity of living also conserve the intellectual energy.

The Use of Atropine in Delirium Tremens.

Touvime (*Archives Medicales Beligues*) advocates the use of atropine in alcoholic delirium tremens and allied conditions. He administered atropine to eleven alcoholic patients, and in a few minutes ten of them became quiet, and fifteen minutes later were asleep. The dose in each case was about one-sixtieth of a grain of atropine sulphate, given hypodermically. Touvime believes that the mode of action of the drug depends upon the stimulation of certain regions in the brain, which, according to the researches of Mendel and Krukemberg, are in a state of depression in delirium tremens.

Whooping Cough.

℞	Bromoformi	℥ xvi.
	Alcoholis	} āā fl. ℥ ii.
	Tinct. card. co.	}
	Glycerini	q. s. ad. ℥ ii.

M. Sig. ℥ i. three times a day.

—BEDFORD.

Treatment of Lupus Erythematosus.

Hebra (*Wien. med. Wochenschrift*) claims to have obtained very good results from the treatment of lupus erythematosus by the application to the lesions of equal parts of alcohol, ether, and spirits of mint. The mixture should be frequently applied without rubbing. Soap should not be used during the treatment.

The Antitoxic Agent in Thyroid Body.

Blum (*Bull. med.*, October 5th, 1898) states that he formerly considered the thyroid body an internal secreting gland, but that he is now of the opinion that its antitoxic action is the principal rôle of the organ. The iodine compound which Baumann isolated is probably one of the antitoxins. It is increased in quantity by the administration of potassium iodide. It does not pass into the circulation, but is decomposed in the thyroid body itself by the toxins in the blood. The iodine thus liberated is partly excreted by the kidneys. If the thyroid body is destroyed, then the toxins give rise to changes in the body and mind which are found in myxedema.

Administration of Anesthetics to Children.

Marshall (*The Hospital*) considers a mixture of equal parts of chloroform and ether the best anesthetic for children. During the early stages of anesthesia the child receives more ether than chloroform, which thus prevents the depression frequently noticed at these periods. The writer also calls attention to some of the differences between the anesthetization of children and adults. The corneal reflex is useless in children, as it is frequently absent long before the patient is under the anesthetic. A better test is to pinch the inner side of the thigh and then to watch for reflex contraction of the leg. Reflexes are very active in children, and movements frequently occur when the patient is unconscious.

The Physiology and Therapeutics of the Thyroid Gland and its Congeners.

Wells (*Jour. of the American Med. Association*) contributes an article upon this subject, and states that the substance of our knowledge of the thyroid gland is contained in the following statements:—

The thyroid gland is an organ of very variable size and shape, reaching the highest degree of development at about adult-life, and decreasing with old age.

It is capable of great hypertrophy, but probably is not capable of more than a slight degree of regeneration.

Its secretion is a colloid material, which is discharged into the general blood-current by way of the lymphatics.

The colloid material contains the active material of the gland, which is a complex but very stable body, called "thyroidin," which contains about ten per cent. of iodine.

This substance either acts as an antitoxin to the products causing autointoxication, or furnishes some substance necessary to tissue metabolism.

Thyroidin is necessary to the animal economy, absence of it in adults producing myxedema; in the new-born, cretinism.

The amount of iodine in the thyroid glands of the inhabitants of any given district varies inversely with the prevalence of goitre in that district.

Thyroid glands of residents of Chicago contain fully four times as much iodine as do glands in the goitrous districts of Germany.

It is probable that glands from the Atlantic coast contain about the same amount of iodine as do the Chicago glands.

Simple parenchymatous goitres contain about the same total amount of iodine as normal glands, but the proportional amount is much smaller. Probably colloid goitres contain the same proportional amount with a very much higher total.

The amount of iodine in the glands of children, from a mere trace at birth, steadily increases until adult years. It then decreases, and in old people again becomes very small.

Therapeutically the thyroid extract is a specific in cretinism and myxedema.

In simple goitre and in obesity the majority of cases are improved or cured.

It seems to have some value in tetany, scleroderma, and arrested growth.

The value in psoriasis and other skin diseases, tuberculosis, insanity, rickets, etc., is doubtful.

It is contraindicated in exophthalmic goitre, heart lesions, albuminuria, and glycosuria. The dose should never be so large as to produce symptoms.

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

A Case of Asymmetry of Frontal Sinus Revealed by Operation.

Dundas Grant (*Jour. Lar., Rhin. and Otol.*, June, 1899.) A woman aged 21 years, suffering from purulent rhinitis, was examined by trans-illumination. This revealed dulness over right antrum and right frontal sinus. Treatment for antral disease was only partially effectual; so frontal sinus disease was suspected.

The right frontal bone was accordingly opened in the normal situation of the frontal sinus, as mapped out by Chipault, and confirmed by Lilly's investigations on a large number of skulls. The probe, however, instead of passing through the right infundibulum, entered the left one and came into the left

nostril. The case was obviously one of extreme asymmetry of the sinuses.

Treatment of Coryza.

William E. Barton (*Brit. Med. Jour.*, June, 1899.) This disease can be aborted by washing or spraying the nasal cavities with a solution of tincture of belladonna. The strength used is $\frac{3}{i}$ to $\frac{3}{iss}$ to $\frac{3}{i}$ of water. After the passages have been freely evacuated, about $\frac{3}{ii}$ of the solution is thrown into one nostril, and a similar amount into the other. Then the nostrils are to be cleared out again and the treatment repeated. If the attack is in the acute stage the coryza should at once cease. If of longer standing, several treatments may be required.

Non-Diphtheritic Pseudo-Membranous Rhinitis.

J. Price-Brown (*Jour. Lar., Rhin. and Otol.*, May, 1899; and *Jour. Amer., Med. Assoc.*, May, 1899) gives a *resumé* of what has been written upon this disease down to the present time. Two directly opposite views are taken by leading writers, the number on each side being almost equal. The one class of observers maintain that all cures of pseudo-membranous rhinitis are essentially diphtheritic in their origin, and consequently are infectious in character. The other class of observers, while admitting that cases of primary nasal diphtheria do sometimes occur, maintain that instances of pseudo-membranous rhinitis do likewise occasionally take place, which are in no way connected with the Klebs-Leoeffler disease; that these cases are non-diphtheritic and non-infectious; that they may be either acute, chronic, or recurrent; and are interesting chiefly from the peculiar pathological conditions which they exhibit.

While the writer, from the record of cases published, as well as from his own personal experience, endorses the second view, he concludes as follows: "That owing to a possible mistake in diagnosis, isolation in all cases should be imperative, until a reliable bacteriological examination can be made."

Nasal Insufficiency due to Exaggerated Prominence of the Anterior Arch of the Cervical Vertebrae.

J. E. Newcomb (*Ann. Otol., Rhin. and Laryng.*, Feb., 1899) This is a report of a paper read at the Laryngological Section of the New York Academy of Medicine upon this rare condition. The symptoms simulate those of adenoid disease. In the majority of cases lymphoid hypertrophy is also present, aggravating the post-nasal stenosis. The bony arch projecting unduly forward, limits the post-nasal space; and the addition of a limited amount of adenoid tissue, is all that is necessary to produce complete oral breathing.

The removal of this tissue will usually be sufficient to accomplish the required relief. Of course the osseous enlargement cannot be removed.

Mendel, Mayer, Simpson and Quinlan have also reported cases that have come under their observation.

Dundas Grant (*Laryngoscope*, May, 1899) has an article on the same subject. It speaks particularly of the difficulty, in these cases, of removing the adenoids located in the hollow above and behind the bony projections. Quinlan's forceps and Golding-Bird's curette are the instruments which he has found best adapted for the operation; while Gottstein's curettes, from their peculiar shape, were inapplicable.

As the condition may be encountered at any time by the surgeon, he advises digital examination in all cases before operative interference is attempted. The removal of the adenoids can then be accomplished, in accordance with the known anatomical condition of the parts.

Foreign Body Impacted in the Naso-Pharynx for Four Years.

R. Patterson (*Jour. Lar.*, May, 1899). This was a metal regulator of an infant's feeding-bottle. It was removed from a child aged six years, suffering from otorrhea of the left side, with foetid discharge from left nostril. There was also complete nasal stenosis, and something could be distinguished in the post-pharynx on looking through the left nasal passage.

Under anesthesia, a hard mass was discovered and removed from the naso-pharynx, and was found to be the body described, thickly coated with phosphates.

The history obtained was that when the child was fifteen months old, while playing with a regulator it suddenly showed difficulty of breathing. This was relieved by suspending the head downwards. From that time nasal breathing became obstructed, and the child's health suffered. At various times subsequently bougies had been passed into the œsophagus by medical men, to prove to the parents that the foreign body was not still in the throat.

Foreign Body in the Naso-Pharynx for Eighteen Years.

H. S. Birkett (*Mont. Med. Jour.*, June, 1899) gives the history of this peculiar case. It occurred in a woman aged twenty-three years. She had had profuse muco-purulent discharge from both nostrils for many years. The odor was characteristic of a foreign body.

When five years old she accidentally slipped a thimble into her throat. This was followed by a violent fit of coughing, which suddenly ceased upon her being thumped upon the back.

One year later she developed "catarrh," which continued from then until the date of examination.

Post-nasal examination revealed a black mass lying close to the septum, and covered with muco-purulent discharge. There was also grating upon being touched with a probe.

Under an anesthetic the foreign body was removed, and was found to be a tailor's thimble incrustated with concretions. The surface of the thimble was perfectly smooth, the usual roughness having been worn away.

Subsequent antiseptic treatment soon resulted in complete removal of symptoms.

Remarks on Laryngeal Growths in Young Children.

G. Hunter Mackenzie (*Brit. Med. Jour.*, May, 1899). In this article the writer advocates tracheotomy as the treatment, of all others, most satisfactory in this condition. He lays it down as an axiom, that the two methods, so frequently advocated—removal *per via naturalis*, and by thyrotomy, are both inadmissible; the reason given being that direct interference with, or irritation of, the growths, is almost always followed by rapid recurrence. The endo-laryngeal method of removal involves a prolonged series of operations, which are usually followed by recurrences; while thyrotomy, when tried, has sometimes required to be repeated three or four times within a year, resulting in more or less permanent affection of the voice, as well as stenosis of the larynx.

Intubation is objectionable in these cases on account of the irritation it produces. It is also frequently difficult to retain the tube in position.

The point that Hunter Mackenzie insists upon is that tracheotomy in this disease is not only a palliative, but also a curative operation.

The order of events he describes as follows: First, the breathing is relieved. Second, the growths being freed from the irritation of coughing and phonation, gradually lose their vitality, and become detached from the vocal cords, without any tendency to recur. If the expectoration and secretion from the windpipe, as taken from the throat of the patient, or from the tracheal wound when cleansing the tube, be examined, the growths will be found to come away in pieces. Gradually, in periods varying from one month to six months, or a year, the papillomata shrivel away and finally disappear.

The tube should not be permanently removed until the growths are all away. This removal of the tracheotomy tube is always objected to by the child, as at first normal breathing is more difficult than the artificial. Consequently, one or two

short reinsertions may be necessary. In a short time, however, breathing becomes natural, and the voice is gradually restored.

Intrinsic Epithelioma of the Larynx.

Lennox Browne (*Jour. Laryn. Rhin. and Otol.*, June, 1899). This is a further report of a case previously exhibited. It had been for nearly three years under observation, having been diagnosed by himself and colleagues as intrinsic epithelioma. For a long time no histological examination was made, chiefly for the reason that he was averse to running any risk of arousing latency into activity. Finally he removed a section and had it examined. It was found to be a gradual development of papillomatous into epithelial tissue.

The voice of the patient had been practically gone for years; and, as he was sixty-nine years of age, had only slight dyspnoea, and was not engaged in any work, it was intended to let him go down the hill quietly without operation.

The result in this case confirmed Lennox Browne in his previous experience of intrinsic neoplasms of the old, justifying the inactive policy, which he had frequently advocated.

On Dysphonic Nervous Cough.

Kayser (*Monats für Ohrenh.*, November, 1898). Any ordinary cough is euphonic; but a disturbing, annoying, insufferable cough, is dysphonic. In a case of the latter, occurring in a girl eleven years old, Kayser had an opportunity to observe the mechanism by which the cough was produced.

Every few minutes she coughed, and the tone had such a piercing, trumpet-like note that she had to leave school. The cough ceased at night. Otherwise the girl was healthy. On examination, the lingual tonsil was seen to be enlarged, and from the right half of it a yellow distended follicle projected. This spot was sensitive, and touching it at once caused the characteristic cough.

On looking with the laryngoscope while the sensitive spot was touched, it was observed that the epiglottis sank downwards and backwards over the entrance to the larynx, and during the act of coughing could be seen to vibrate.

When the epiglottis was raised and held up by a Reichert's spatula, the cough lost its trumpet tone and became an ordinary cough. After holding up the epiglottis several times, it remained up of itself for some time, and this cough continued natural.

The enlarged follicle and hyperesthetic area on the lingual tonsil were then cauterized, and the cough soon entirely disappeared.

Nasal Treatment of Asthma.

William Armstrong (*Brit. Med. Jour.*, June 3rd, 1899) strongly supports Dundas Grant's view, that gout and nasal disease are in many instances combinedly causative of asthma. The theory is, that, as between 10 and 30 per cent. of the normal amount of uric acid excreted by the kidneys is retained in the blood during attacks of gout, it may endeavor to secure elimination through the nasal mucous membrane; and by the irritation thus produced, give rise to the formation of sensitive areas, mucous polypi, hypertrophies, etc. These in turn, by reflex nervous influence induce the vaso-motor paresis of asthma.

Numerous instances are given to verify this conclusion. In gouty subjects the removal of nasal polypi, etc., would only partially relieve the asthmatic symptoms; but eliminate also the uric acid from the blood, and relief would be complete. On the other hand, treat only the systemic disease, without removal of the intranasal lesion, and the asthmatic symptoms would still remain.

His conclusion is that: "As in gouty asthma, the condition of the nasal cavities should not be ignored, so in asthma with marked nasal symptoms, the gouty factor ought not to be disregarded."

HYGIENE.

IN CHARGE OF WM. OLDRIGHT, M.A., M.D.

Report of an Investigation at the Stock Yards, Chicago.

We clip the following from the *Chicago Tribune*: "Twenty-five cows, known to have been milked a week ago for the Chicago market, were slaughtered and dissected by the State Board of Live Stock Commissioners at the abattoir of B. Wolf, Forty-first street and Union avenue, yesterday morning, and were found to be infected with tuberculosis. Under the circumstances which led to the condemning and slaughtering of the animals, the commissioners believe they have not only substantiated the efficacy of the tuberculosis test, by which the presence of tuberculosis in the bodies of cattle can be ascertained without necessitating *post-mortem* examinations, but also that they have proved that the tuberculosis has a more universal hold on cattle, especially on cows, than is generally realized.

"As a result of the day's demonstration, they declare the correctness of the assertion that two-thirds of the cows that furnish milk to Chicago consumers are victims of tuberculosis is unquestionable, and that prompt steps for checking the further progress of the disease are necessary.

LOOKED LIKE HEALTHY CATTLE.

"That milch cows can be in virulent stages of tuberculosis growth without its being apparent was shown when the twenty-five subjects of the test were driven into the slaughtering stalls. All of the cows seemed to be in fine physical condition. The only ground on which they were suspected as victims of tuberculosis was the fact that their temperatures had risen to a high degree when they were subjected to the tuberculosis test. The remainder of the herd of sixty-one, from which the infected animals were taken, had shown no increase of temperature after hypodermic injections of tuberculin, and had been declared sound.

"It was hardly expected that all of the twenty-five cows would be found to be so thoroughly infected with tuberculosis clusters.

FINDS A PINT IN ONE GLAND.

"The first-cow dissected had sound, hard muscles and showed no superficial symptoms of consumption or any kindred disease. Its head was severed from the body and Dr. Lovejoy began the *post-mortem* examination. Through an aperture made with a knife he removed a gland swollen to the size of two fists. This gland contained about a pint of semi-liquid tuberculosis. The substance was of a creamy color and contained yellow, mushy grains. The substance was declared to be pure tuberculosis, the lymphatic fluid having been entirely expelled by it from the gland. The whole carcass was infiltrated with tuberculosis.

"In the third subject the bulk of the tuberculosis was found in the liver. It was spread over this organ in deposits which were white and resembled small fungi.

"In the lungs of other carcasses the disease showed itself in the form of incrustated combs. Only in one carcass was it found that the tuberculosis had imbedded itself in large miliary, or soft, deposits in the flesh. In characteristic cases the disease was found to have attacked the glands and lungs, where it met with the least resistance, and there to have shown tenacious vitality.

"In no case was it found that the udder had been affected, although this, it was stated by the examiners, in no wise lessened the danger of a secretion of the tuberculosis bacilli with the milk.

"The average quantity of tuberculosis found in each cow was about a pint. The total amount removed from the twenty-five cows, about three gallons, if allowed to dry to a dust and be scattered to the atmosphere, could destroy, it was stated, all the cattle in the world.

RECORDS OF CASES.

"The following record made by Secretary Johnson for the Board of Live Stock Commissioners shows the various ways in which tuberculosis had attacked the cows. The organs named are the places where the disease made its stronghold. The record of each case is given, the numbers indicating the order in which the *post-mortem* examinations were made:

- 1—Abscess in mediastinal gland!
- 2—Abscess in pharyngeal gland.
- 3 and 13—Miliary deposits in liver.
- 4, 16, and 25—Miliary deposits in walls of intestines.
- 5 and 6—Abscesses in mediastinal glands and lobes of lungs.
- 7—Miliary deposits in lobes of lungs.
- 8 and 21—Abscesses in mesenteric glands.
- 9—Large abscesses and deposits in mediastinal glands and miliary deposits in mesenteric glands.
- 10—Caseous deposits in mediastinal glands.
- 11—Abscesses in pharyngeal glands.
- 12—Abscesses in pharyngeal glands and lungs.
- 14, 15, and 25—Caseous deposits in mesenteric glands.
- 16—Caseous deposits in mediastinal glands and joints of knees.
- 17—Calcareous deposits in mediastinal glands.
- 18 and 20—Caseous deposits in lungs.
- 19—Caseous deposits in pharyngeal glands, deposits in lungs, and calcareous globes in lungs.
- 23—Abscesses in mediastinal glands,
- 24—Abscesses in mesenteric glands and deposits in liver.

"The cows which were subjected to a test and examination, were taken from a dairy that has been sending two carloads of milk to Chicago daily. The herd at this dairy was selected for the demonstration of the efficacy of the tuberculin test at random, and the commissioners say they have no reason to believe it was in a worse condition than any of the other dairy centres that send milk to Chicago. They declare that if the State would appropriate the funds necessary they could visit almost all the dairies in Illinois with the same result.

CONCLUSIONS ON THE SUBJECT.

"The deductions relative to cows and dairy products reached by Dr. Lovejoy and other veterinarians, are as follows:

"The presence of tuberculosis in cows cannot be determined by the physical appearance of the animals.

"The fact that about every third cow is infected and that dairies mix milk makes nine-tenths of the milk that comes into Chicago subject to suspicion.

"Butter and cheese being mediums congenial to the growth of tuberculosis, these products are likely to transmit the bacilli.

"Tuberculosis is making unimpeded progress and is destined to develop to such an extent that in a few years only a small proportion of cattle will be without it.

"Tuberculosis has greater vitality than any other germ and retains a vital state when dried. It propagates in rags and rubbish, as well as when imbedded in organic matter.

"The tuberculosis in cattle and the tuberculosis in humans are essentially the same, and readily transplant themselves from one body to another.

"Private citizens should form societies for the education of the unscientific on the subject. Medical societies should disseminate literature on the subject of tuberculosis.

PLAN FOR A CONVENTION.

"The Commissioner of Health, Dr. Arthur R. Reynolds, has definitely decided to call a tuberculosis convention in Chicago, and to that end has begun organizing the physicians of the city. The organization's purpose will be to urge legislative appropriations of enough money to stop the spread of tuberculosis in whatever form. As soon as the date for the convention is agreed upon it will be announced. The following physicians have already signified their intention of participating in the convention: Nicholas Senn, John A. Robison, Frank S. Johnson, Arthur Bevan, T. T. McArthur, E. Fletcher Ingalls, Theodore A. Klebs, James Herrick, William E. Quine, Norman Bridge, E. J. Doering, Frank Billings, Christian Fenger, H. Miller, J. B. Murphy, Homer Thomas, A. C. Klebs, Henry M. Lyman, Henry B. Havill, Arthur R. Edwards, Ludwig Hektoen.

CONSIDERS THE WORK IMPORTANT.

"I will close my desk and, if necessary, neglect other affairs to see that we organize a body in Chicago that will take quick and effective action toward checking this tuberculosis plague," said Dr. Reynolds. "This is an important public matter. It has been too long neglected. I am glad public opinion is being aroused in the matter. Prominent physicians agree the time is ripe for action. We propose, through a convention, to put the facts before the public, and are confident the people then will demand an adequate appropriation from the Legislature.

"It is our intention to publish and circulate rules for the checking of tuberculosis growth and to carry on a general crusade for the prevention of the propagation of tuberculosis. This will mean the saving of hundreds of lives each year, for

when people die from diseases resulting from tuberculosis, they die from negligence.'

"The records of the Health department show that 1,900 people die every year in Chicago from tuberculosis diseases. During last December, 358 people died from tuberculosis, and 282 indirectly from the same cause. One-sixth of all deaths in Chicago are caused by tuberculosis according to the records."

The American Electro-Therapeutic Association will hold its ninth annual meeting at Washington, D. C., September 19, 20, 21, 1899. The President, Dr. F. B. Bishop, appointed the following Committee of Arrangements:

Dr. D. Percy Hickling chairman; Jos. Taber Johnson, G Lloyd Magruder, Z. T. Sowers, Robert Reyburn, G. Betton Massey, Chas. R. Luce, Elmer Sothoron, Llewellyn Eliot, Clifton Mayfield.

Willard's Hotel has been chosen for the headquarters and special rates have been made for all interested in this meeting.

Many able papers have been promised and a very successful scientific meeting is assured. There will be a large and varied exhibition of Electro-Therapeutic apparatus in Willard's Hall during the meeting of the Association. Willard's Hall is well adapted for this purpose, as it not only adjoins the headquarters, but communicates with it by a corridor, and there is also a large entrance directly from the street. The committee also promises a very pleasant social program, including a reception by the President of the United States, an excursion to Mount Vernon, Arlington and Alexandria—a buffet lunch to be served at Alexandria,—an evening visit to the Congressional Library to be viewed under electrical illumination. Provisions have also been made to visit the War, State and Navy Departments, the United States Treasury, and other public buildings.

It is earnestly hoped that every fellow, active, honorary and associate, will be present at this meeting as we want to make it rank among the notable meetings of the Association.

Very sincerely,

S. PERCY HICKLING.

Editorials.

THE OPEN-AIR TREATMENT OF TUBERCULOSIS.

It is very satisfactory to learn from many sources that the open-air treatment of patients suffering from tuberculosis has already produced remarkably good results, even in climates which had previously been supposed to be unsuitable for consumptives. In the *Practitioner* for June we find interesting reports from a number of physicians. All are agreed that these patients can best be treated in properly conducted sanatoria. Mr. Morris, in his editorial comments, speaks of Dr. Philip, of Edinburgh, as the pioneer of this method in Great Britain. "He has had to work in the most villainous climate in the kingdom. Edinburgh is a test case, yet there, Dr. Philip keeps his patients exposed to the open air during seasons of the year which are trying to persons in vigorous health." He considers that "consumptive patients can be out of doors during the larger portion of daylight, even when actual sunshine is small in amount."

Dr. Calwell, of Belfast, speaks in a very encouraging way of his results in that city, although he considers that there are few places worse situated for the treatment of phthisis than Belfast, on account of the smoke-laden atmosphere, overcrowding, and unhealthy occupations of many of its inhabitants. Yet his results during the past year have been so good that he believes that open-air treatment "is somewhat the same as that of administering iron in anemia, or mercury or iodide of potassium in syphilis." Dr. Barton-Fanning also publishes a paper, in which he speaks of good results in his practice on the Norfolk coast, during the last four years. He thinks that tuberculous peritonitis and lupus may be cured by this method. Dr. Rowland Thurnam, of Mendip Hills, England, tells of the good work accomplished by himself and his colleague, Dr. Gwynn, both of whom have recovered from phthisis after being treated by Dr. Walther, at the Nordrach Sanatorium in Black Forest. We may say to those who are taking special interest in this subject that all the papers referred to, which appear in the June num-

ber of the *Practitioner*, are not only exceedingly interesting but also give a vast amount of information as to details of treatment.

THE MEETING OF THE ONTARIO MEDICAL COUNCIL.

The recent meeting of the Medical Council was in a general way very satisfactory. Many of the discussions were slightly *heated*; but as a rule they were not so acrimonious as those of the last three years. The first important business was the election of a President. For this office there was a close contest between Dr. Roome, of London, and Dr. Henry, of Orangeville, the former being elected by a majority of one. Dr. Britton was elected Vice-President without opposition; and Drs. Pyne and Wilberforce Aikins were re-elected Registrar and Treasurer, respectively. The former Discipline Committee was re-elected as follows : Dr. Bray, Chatham; Dr. Moore, Brockville; and Dr. C. T. Campbell, London.

The question of the annual membership fee elicited a somewhat lengthy discussion, but finally the by-law was passed, fixing the fee as before at two dollars.

The committee appointed to deal with infractions of the Medical Act, presented their report, which, in part, said:—"Some 65 cases were prosecuted and investigated, resulting in 17 convictions. Seven left the country, 8 paid their fines, 4 were sent to gaol. Many unregistered practitioners were reported from different localities, many of these being found to be students under the fifth year curriculum, who in some instances appeared to be regularly practising. This fact continues to be a source of irritation to members of the college throughout the country."

A great many important subjects were discussed at the meetings of the Education Committee, but no very important change was made, excepting that which governs the numbers of didactic lectures. For the last few years each winter course included not less than fifty lectures in each subject, and each half course included not less than twenty-five. According to the new regulation, eighty and forty, respectively, will be required.

We must confess to a little surprise at this change. The tendency of the day in all modern educational institutions is to diminish the purely didactic lecturing and increase practical bedside and laboratory instruction. Considering the fact that this whole question was well threshed out in the Council a few years ago, when the curriculum in this respect was amended so as to suit modern ideas, it seems strange now to see this same body commencing to drift back to ancient methods. Many new examiners were appointed as will be seen by the list which appears in another column. We think that the new board will be found quite satisfactory.

A lengthy report on inter-provincial registration was presented by Dr. Williams, the chairman of the committee, and the recommendations were adopted. The meeting appointed a committee to consult with the Executive Committee of the Canadian Medical Association at the coming meeting.

THE CANADIAN MEDICAL ASSOCIATION.

We publish in this issue a provisional list of the papers promised for the coming meeting of the Canadian Medical Association, which will be held in Toronto, August 30th, 31st, and September 1st. As this list only contains the papers promised up to July 28th, we have every reason to believe that several other papers will be forthcoming. We are informed by the secretary that there is every likelihood that there will be a decided plethora of papers. However, it is always better to have too many than too few. Taking it altogether, we must say that we have not seen a better early provisional programme for many years.

We are glad to be able to state that the Committee of Arrangements, under the chairmanship of Dr. Arthur Jukes Johnson, has done remarkably good work. Several meetings have been held, and we have every reason to believe that an exceptionally good programme for the entertainment of guests and visiting members will be provided. We understand that the Toronto city council and the directorate of the Toronto Industrial Exhibition are preparing to extend certain courtesies to the association.

TUBERCULOSIS IN CATTLE.—The extent to which disease may exist in cattle without endangering the health of human beings, and the value of tuberculin in determining and measuring the existence and amount of tubercle are questions which are now being debated. A short time ago an article appeared from a reputable medical source, calling for caution in the destruction of property, and mentioning an instance in which, after an animal had been slaughtered, just one gland was found diseased. We will not stop now to discuss the two cognate questions, but we consider them of such great practical importance from a sanitary and economic standpoint, that we invite discussion of them in our columns, and this importance is our reason for publishing *in extenso*, in our Hygienic department, a somewhat lengthy article from one of last month's issues of the *Chicago Tribune*.

PROGRAMME CANADIAN MEDICAL ASSOCIATION.

The thirty-second annual meeting of the Canadian Medical Association will be held at Toronto on Wednesday, Thursday and Friday, the 30th, 31st inst., and September 1st, next.

Through the kindness of the Honorable the Minister of Education for Ontario, the building of the Education Department has been placed at the disposal of the Association, and in it the meeting will be held. This building is most centrally situated, as the Church Street cars pass the building, and the Yonge Street line is but one block away.

The programme will be of exceptional interest, and the very important subject of Inter-Provincial Registration will receive full discussion at this meeting.

A number of entertainments have been provided for, including a Reception and Musicales for members and their friends on the first evening; a Lunch at Exhibition Park; an Afternoon Tea at the Royal Canadian Yacht Club on the Island; a Smoking Concert, and other entertainments.

There will be an exhibition of instruments, drugs and physicians' supplies in connection with the meeting.

The Committee of Arrangements is making every possible effort to insure a successful meeting, and trusts that there will be a very large attendance. As the meeting is held during the first week of the Industrial Exposition, railway tickets to Toronto and return may be obtained for a single fare. We earnestly urge upon the members of the profession, to a man,

to turn out to this meeting and make the thirty-second annual gathering by a long way the biggest on record.

PROGRAMME.

The President's Address will be delivered on the afternoon or evening of the first day.

The address in Surgery will be given by W. B. Coley, of New York.

The address in Medicine by J. T. Fotheringham, of Toronto.

In the Skin Clinic, G. Chambers, A. McPhedran, of Toronto, A. R. Robinson, of New York, and others will take part.

The following is a partial list of the papers to be read :

"The best method of dealing with the consumptive poor." E. J. Barrick, Toronto.

"Floating kidney simulating disease of the ovaries and tubes." A. Laphorn Smith, Montreal.

"Observations on adenoids and enlarged tonsils and their removal, with notes of eighty cases in private and hospital practice." D. J. Gibb Wishart, Toronto.

"The methods and ultimate results of operations for halux valgus." N. A. Powell, Toronto.

"Report of a case of abdominal pregnancy." H. Meek, London.

"An experience in formaldehyde disinfection." F. Montizambert, Ottawa.

"An inquiry into the etiology of chronic Bright's disease." A. G. Nicholls, Montreal.

"Operations for extra-uterine gestation." H. H. Chown, Winnipeg.

"Tuberculosis in cattle and its prevention." J. George Adami, Montreal.

"The hospital room in each dwelling." W. J. Telfer, Montreal.

"The treatment of spina bifida." Geo. A. Bingham, Toronto.

"Complications and treatment of fractures of the skull." J. M. Elder, Montreal.

"Recurrent paralysis of the third nerve (Charcot's ophthalmoplegic migraine)." J. W. Sterling, Montreal.

"Tuberculosis and insurance." J. Hunter, Toronto.

"(a) Typhoid infection without intestinal lesion ; (b) Gastropotosis." A. McPhedran, Toronto.

"Some observations on the treatment of cancer." A. R. Robinson, New York.

"Gall-bladder surgery." J. F. W. Ross, Toronto.

"Typhoid epidemics I have met." Wyatt Johnston, Montreal.

"The treatment of cataract." R. A. Reeve, Toronto.

"Christian Science." J. H. Richardson, Toronto.

"Anesthesia by chloroform and ether." Wm. B. Jones, Rochester.

"Treatment of the acute digestive disorders of infancy." A. R. Gordon, Toronto.

"Rhinoliths." Hubert D. Hamilton, Montreal.

"Observations on the relations of the thyroid gland to the uterus." C. R. Dickson, Toronto.

"The question of operation on thyroid tumors." Geo. A. Peters, Toronto.

"A case of malignant disease of the gall-bladder, simulating hydro-nephrosis (feeding through the gall-bladder for three days)." F. N. G. Starr, Toronto.

"Nephro-lithotomy." B. L. Riordan, Toronto.

"The mastoid operation in chronic middle ear disease." J. M. MacCallum, Toronto.

"Ringworm in Toronto." Graham Chambers, Toronto.

- "The Great Lakes as a health resort." E. H. Adams, Toronto.
 "A case of subcutaneous emphysema." Frederick Fenton, Toronto.
 "An original method for the direct estimation of proteid digestion in the stomach." A. L. Benedict, Buffalo.
 "Craniectomy for microcephalous with patient." W. J. Wilson, Toronto.
 "Curettage, its use and abuse." R. Ferguson, London.
 "Notes on a case of Jacksonian epilepsy with operation." D. Campbell Meyers, Toronto.
 "Massage and the relief of eye-strain in the treatment of glaucoma." G. M. Gould, Philadelphia.
 "Extreme emaciation in hysteria, with notes of a case." T. Beath, Winnipeg.
 "Hydro-therapeutics in the treatment of disease in children." A. D. Blackader, Montreal.
 "The results already achieved at the Gravenhurst Sanitarium." J. H. Elliott, Gravenhurst.

Papers have also been promised by A. L. Benedict, Buffalo, G. H. Burnham, A. B. MacCallum and J. J. Mackenzie, of Toronto, and a number of others.

During the meeting, T. G. Roddick, of Montreal, will address the Association on the subject of "Dominion Registration."

The Pathological Museum, in charge of a committee with A. Primrose as chairman, will add much to the interest of the meeting. A great many specimens have been promised, among which are the following:

- Lower half of rectum removed for cancer. A. L. Smith, Montreal.
 Ectopic pregnancy. H. Meek, London.
 Extra-uterine gestation, and others. H. H. Chown, Winnipeg.
 Rarer forms of aneurism. Hearts. Calculi. Disease and fractures of bone, and others. J. Geo. Adami, Montreal.
 Cast of hand from a case of acromegaly. J. M. MacCallum, Toronto.
 Congenital atresia of small intestine. W. B. Jones, Rochester.
Eustrongylus gigas in kidney of mink. Formaldehyde preparations.
 Dry anatomical preparations. F. N. G. Starr, Toronto.
 Obstruction of colon by large gall-stone. Superfoetation, abortion at 4th month, 2 sacs 4 months and 6 weeks. Elevated fracture of skull.
 Heart and aorta. Fusiform dilatation of latter due to syphilitic endarteritis. Carcinoma of prostate with terminal suppurative cystitis. Columnar-celled carcinoma of stomach. Diffuse infiltration from cardiac to pyloric orifices. Solid ovarian tumor (Filseo-Myo-Sarcoma) twelve pounds, etc. W. T. Connell, Kingston.
Lung—Chronic tuberculosis, Acute miliary, Tubercular broncho-pneumonia, etc. *Female Generative Organs*—Adhesions of pelvic organs, Pyosalpinx, Cysts, Tumors, etc. *Bladder Urinary*—Prostatic changes, Sacculation, Calculi, etc. *Bladder Biliary*—Hydrops, Calculi, etc. *Kidney*—Cirrhotic changes, Cysts, Tumors, Hydronephrosis and Pyonephrosis, Calculi, Tuberculosis, Anomalies and faults. *Esophagus*—Stricture, New growths. *Stomach*—Ulcer simple, Carcinoma. *Intestine*—Adeno-carcinoma, Colitis, Enteritis chronic, Typhoid changes, Tubercular ulcerations. *Appendices*: *Heart*—Anomalies and developmental faults, Pericarditis, Myocarditis, Myomalachia cordis, Endocarditis, Chronic valvular disease, New growths, Dilatation and hypertrophy without valve lesion. *Blood Vessels*—Atheroma, Aneurisms, Ectases, Varicose veins. *Liver*—Abscess, Cirrhotic changes, Venous congestion, Amyloid, Syphilis, New growths. W. Goldie, Toronto.

Correspondence.

LETTER FROM LONDON.

To the Editor of CANADIAN PRACTITIONER AND REVIEW :

DEAR SIR,—Every medical man, in coming to London, has some special object or study in view, to which he devotes the greater part of his time. Outside of this special object, however, he has a certain amount of time at his disposal, in which he may visit general hospitals, medical institutions of various kinds, or attend the meetings of medical societies. The difficulty is to make a selection among those various ways of spending his time—so many attractions offering on every hand.

One of the most recently organized of the institutions which are of interest is the Polyclinic. This really is a post graduate school. London has been strangely backward in having a really first-class, up-to-date post graduate school or course. Now, however, the want is supplied by the Polyclinic. Short practical courses on various subjects, eye, ear, skin diseases, nervous diseases, etc., etc., are given. Clinics are given in the afternoons by some of the best clinicians in London, among whom may be mentioned Jonathan Hutchinson. A great number of Canadians will remember the clinics which Mr. Hutchinson gave every week at his own residence, and to which every doctor was welcome. But Mr. Hutchinson gives no clinics at his residence now, having transferred to the Polyclinic.

Turning to another subject, the various annual lectures, such as the Hunterian and Croonian, are now being given before the medical societies.

The West London Medico-Chirurgical Society was fortunate enough to have Dr. Osler, of Baltimore, as their Cavendish lecturer this year. The lecture was delivered last evening before a crowded meeting of the society. Dr. Osler's fame had preceded him, not only as an original worker in the domain of medicine, but as the author of his work on the practice of medicine—a book that is largely used in the colleges here. The subject of the lecture (a copy of which has been promised by Dr. Osler, and which will be forwarded to the *PRACTITIONER* as soon as received) was "Cerebro-Spinal Fever"—being an account of an epidemic of this fatal affection, which occurred recently in Baltimore. The lantern was made use of to show temperature charts, and various matters of interest in connection with the disease—the lecture and demonstration being received with marked favor by the society.

In proposing a vote of thanks, Dr. Ball felicitously remarked that he understood that Dr. Osler had been born in Canada—and was still a Canadian—and that they could welcome him as a representative of Canadian and Colonial medicine, as well as the representative of American medicine.

In the delightful conversazione which followed I had the pleasure of meeting a number of Canadians—among whom may be mentioned Dr. Anderson of Trinity College, Rudolf of Toronto University, Turnbull of Clinton, Middleboro of Owen Sound. But the fact is that one is constantly meeting Canadian doctors—they are very much in evidence in London at present—and it is a foregone conclusion that Canada will be well represented at the meeting of the British Medical Association, so soon to be held at Portsmouth.

London, June 17, 1899.

J. T. DUNCAN.

ROYAL LONDON OPHTHALMIC HOSPITAL.

This, the largest Eye Hospital in the world, and also the oldest, has interest for many Canadian medical men, being visited by them in increasing numbers year by year.

It was established on its present site in 1804. This locality was known formerly as "Moorfields" hence the name which is so often applied to the Hospital, for it is better known to the public, and probably also to medical men, as "Moorfields Hospital," than by its proper name—"the Royal London Ophthalmic."

The building stands at the head of one of the busiest thoroughfares of London, viz., Liverpool street. Partly its location, but much more the character of the work done by the staff, has caused it to be crowded with patients almost from the day it opened its doors. The building was enlarged from time to time, but as it is now impossible to enlarge it further, and as the numbers attending (about 400 per day) could not be properly attended to, it was found necessary to sell the property and obtain a site for a new building. The property (about 120 feet frontage facing Liverpool street) was sold for about four hundred thousand dollars, and a new site obtained about half a mile distant. This site is on City Road, and is about three-quarters of an acre in extent, and upon this have been erected the fine new buildings which were formally opened the other day by the Duke and Duchess of York. The ceremony was an interesting one, but it will be of more interest to give some account of this "up-to-date" hospital than to describe the ceremony.

Partly from personal inspections, and partly from the reports in the medical press, I give the following particulars. The buildings face on three streets. The out patients enter from

Peerless street and pass to a large waiting hall, where they take their places before the surgeons of the day. Three surgeons and three assistants attend every weekday morning, making six who thus see patients. Opening from the consulting room are the refraction and minor operation rooms, and also the large dark room, which has compartments for eighteen patients. Near the dark room is the room for X-ray work, while the dispensary and spectacle rooms are near the exit.

The operating theatre is upstairs, and may be reached by an elevator. In the theatre (and the same is true to a great extent all through the building) great care has been taken to avoid the accumulation of dust, corners and nooks or ledges being absent. The doors consist of plain slabs of wood without ornament. The walls and ceiling are lined with opalite—an opaque tinted glass tile. The blackboard for demonstration purposes is made of ground glass, and is set in flush with the level of the wall. This to avoid any ledge for dust, and for the same reason the mirror is inserted into the wall in like manner. The constant and interrupted current are both supplied, the first being especially for the Haab's magnet, which is of large size.

The wards are models—light, airy, and with the best arrangements for ventilation. The children's wards are excellently arranged. The day rooms open out on balconies so that patients may have the benefit of sunshine (when the sun condescends to shine) and the most modern plumbing and sanitary arrangements are found throughout the building.

In regard to cost, the sale of the old property has provided the new site and hospital building, so that they are free from debt. A sum of \$155,000 is required per annum for maintenance, which sum is provided by voluntary contributions from those interested in the hospital.

July 9, 1899.

J. T. DUNCAN.

Personals.

Dr. Abbott, of Baltimore, spent a few days in Toronto in July.

Dr. J. B. Fraser, Queen Street East, Toronto, is at present in California.

Dr. R. A. Reeve, of Toronto, left for Europe about the middle of July.

Dr. W. B. Geikie, of Toronto, left for a holiday of a few weeks. After his return to the city he will devote himself entirely to consultation practice.

GENERAL HOSPITAL STAFF.—The following graduates in medicine were appointed by the trustees of Toronto General Hospital as house surgeons for 1899-1900: Dr. G. W. Alexander, Carlton; Dr. M. B. Dean, Brighton; Dr. E. Baker, Simcoe; Dr. F. Turnbull, Milverton; Dr. Colin Campbell, Toronto; Dr. H. W. Spence, Toronto; Dr. G. A. Schmidt, Stratford; Dr. A. D. Stewart, Toronto; Dr. C. A. Page, Toronto; Dr. A. A. Shepard, Toronto. Drs. J. A. Roberts and R. S. Broad were appointed as alternates should any of the above gentlemen be unable to accept.

COUNCIL EXAMINERS.—The following Board of Examiners was appointed at the recent meeting of the Ontario Medical Council: Dr. H. B. Anderson, Toronto, anatomy descriptive; Dr. D. E. Mundell, Kingston, theory and practice of medicine; Dr. H. Howitt, Guelph, midwifery and kindred subjects; Dr. Primrose, Toronto, physiology and histology; Dr. J. W. Edgar, Hamilton, surgery; Dr. William Gunn, Clinton, medical and surgical anatomy; Dr. Graham Chambers, Toronto, chemistry and toxicology; Dr. Schooley, Welland, materia medica and pharmacy; Dr. J. H. McLellan, Hamilton, medical jurisprudence; a doctor from Western hospital to be appointed assistant in surgery and diseases of women; Dr. J. Third, Kingston, first assistant in medicine; Dr. G. H. Fields, Cobourg, second assistant in medicine; Dr. E. F. Adams, Toronto, Homeopathy.

Obituary.

JAMES ELLIOT GRAHAM, M. D., M. R. C. P. LOND.

Dr. Graham was born in the County of Peel, Ontario, in May, 1847. He was a son of Mr. Joseph Graham, of Brampton, who died last March at the ripe age of ninety-two. He received his preliminary education at Weston Grammar School and Upper Canada College. He early showed that he possessed a combination of those qualities which made him a distinguished man in later years. He received his undergraduate medical education in the Toronto School of Medicine, and at the same time passed the annual examinations in the University of Toronto—always with high honors. At the final examination in 1869 he was awarded the University gold medal, and also the Starr gold medal. In the following year he was appointed a resident physician of the Brooklyn City Hospital. After he had spent a short time in this hospital, he was appointed a Surgeon without rank in the Prussian army, which position he held during the Franco-Prussian war. He then engaged in post-graduate work in Vienna, after which he went to London, where he soon obtained the diploma of L. R. C. P., Lond.

He commenced regular practice in Toronto in 1872, and was at once recognized as a bright, active and capable physician. He soon acquired a large practice, and also a good reputation among his fellow practitioners. He was married July 15th, 1873, to Miss Mary Jane Aikins, second daughter of the Hon. J. C. Aikins. In 1875 he became a member of the visiting staff of the Toronto General Hospital, which position he held up to the time of his death. He also held other positions in connection with hospitals and various charitable institutions in Toronto, but apart from his private practice, did most of his work, clinical and otherwise, in the General Hospital. He first practised for about five years on Yonge street, after which he removed to the corner of Church and Gerrard streets, where he remained until the year 1896, when he removed to his late residence, 134 Bloor Street East.

After he had been in Toronto about three years, he was attached to the staff of the Toronto School of Medicine, where he did work as demonstrator of anatomy and demonstrator of microscopy. He was for two years lecturer in chemistry, but gave up that position because he preferred to devote himself especially to clinical teaching in the General Hospital. At the reorganization of the Medical Faculty of the University of Toronto, in 1887, he was appointed Professor of Clinical Medicine and



JAMES ELLIOTT GRAHAM, M.D., M.R.C.P. LOND.

Medical Pathology, and Lecturer on Dermatology. In 1892, after the resignation of Dr. Henry H. Wright, he was appointed Professor of Medicine and Clinical Medicine. He was an active member of many medical societies, and was a Past-President of the Toronto Medical Society, the Toronto Pathological Society, the Canadian Medical Association, the American Dermatological Association, and some others. He was one of the original founders of the Association of American Physicians. He was also the founder of the Ontario Literary Association, of which he was for some years President. In 1893 he became a member of the Royal College of Physicians, London.

His health had not been good for some time. About fifteen years ago he developed symptoms of glycosuria, which fact was only known to his intimate friends for many years. Although by the exercise of great care, he continued in fairly good health notwithstanding this disability, he and his friends were at last forced to accept the fact that he was suffering from a serious form of diabetes. He went south in February last, and we all hoped that a residence for a few months in a warmer climate than ours would give him a chance to recuperate. Unfortunately he had an attack of lagrippe in Baltimore, resulting in a broncho-pneumonia, which left a slight permanent lesion in his lungs. The diabetes, after this, became worse in all respects, and he lost strength rapidly. Kind friends, including Osler, Barker, Fletcher, McCrae and others, did all in their power to relieve his suffering, but were unable to bring back to him health and strength.

He returned with Mrs. Graham to his home in Toronto, in the latter part of April, and for a time appeared to be gaining in some respects. He was cheerful and glad to be at home. He looked forward with pleasure to his expected trip to Muskoka, where he hoped to spend the summer. His friends were hopeful as they saw the slight signs of improvement, especially as Muskoka had always agreed with him in the past. He had himself fully decided, however, that he could never again, with safety, spend a winter in Canada. He and Mrs. Graham went to Gravenhurst, Muskoka, May 25th, and remained in the Sanitarium of that town. At first we heard rather favorable reports about indications of returning strength. He was able to take short trips on the water. Very soon, however, there came a report that he was growing weaker, but there was no indication of any sudden collapse, until the evening of July 6th, when he seemed weak, but was in full possession of his mental faculties. During the night he grew worse, and suddenly lapsed into diabetic coma on Friday morning about five o'clock. He never recovered consciousness, but continued to sink until 5 o'clock in the afternoon, when he died.

It is a simple matter to give a brief history of Dr. Graham's career, but a very difficult task to write an ordinary obituary notice that will do justice to the character of the man, and at the same time give anything like a proper review of the great and good work he accomplished during his life. Fortunately, the profession of Canada, as well as the general public, fully recognized his admirable qualities of mind and heart, and showed their appreciation during his life. From a purely medical standpoint, however, I have to note that his reputation spread far beyond the confines of our Dominion. He was almost as well known to the leading medical lights of the larger cities of the United States as he was to his friends in Canada.

It was my privilege to know James E. Graham, both as a boy and a man. As a boy, he was bright, studious and clever—to such an extent that his friends expected much from him. As a man, he improved and developed in many ways—to such an extent that he more than realized all previous expectations as to his success in life. My more intimate acquaintance with him extended over a period of about twenty-one years. If asked by the graduates of to-day to tell the secret of his success, I must say that I would have nothing striking or novel to relate. I would answer in a general way that strict integrity, unvarying industry, steadfastness of purpose, good judgment, uniform courtesy and kindness of manner, and charity towards all men were the qualities in him that made him great.

When he commenced practice in Toronto in 1872, he had fortified himself by having obtained a good knowledge of his profession by four years of undergraduate work, and three years of post-graduate experience. An old and common expression suits his case exactly: He always thought that a thing that was worth doing at all, was worth doing well. He neglected nothing in the way of the smallest detail in his treatment of any patient, were he rich or poor. He studied each case as carefully as if he had never heard of such a case before. He was in every case patient, kind, thoughtful and attentive.

Soon after he commenced practice, he began to pay special attention to certain branches of his profession—pure medicine and dermatology. He always endeavored to keep abreast of the times, and early formed the habit of going frequently to large medical centres in the United States and Europe to gain more knowledge. He investigated his cases thoroughly, wrote histories of them, and frequently published the results. He wrote much for medical societies and medical journals. He refused to take any active part in politics or anything else that was not directly connected with his profession. After he gave two courses in chemistry, he refused to do any more work of that kind, because he desired to confine himself strictly to medi-

cine, both in his teaching and practice. He was one of the first, if not the first, that gave systematic bedside instruction in the General Hospital. In that class of work he was closely associated with Dr. Fred Grasett for several years; and I believe I am correct in saying that these two were the pioneers in practical clinical medical teaching in this province.

Soon after he commenced to pay special attention to medicine, he gave up the practice of surgery and obstetrics, and refused to treat any other than purely medical cases; but notwithstanding this decision, or perhaps partly on account of it, his work increased to such an extent that he found it difficult or impossible to do it all without some help from other practitioners. For some time he gave much overflow work into the hands of his friends.

Dr. Graham was one of the most active workers in the reorganization of the medical Faculty of the University of Toronto in 1887, and took the deepest interest in the success of that Faculty as long as he lived. During the unholy faction fight of 1892, he very seriously deplored the methods employed by certain individuals, and felt very acutely the injustice of the attacks made upon himself and others. His conduct, however, was admirable throughout the whole controversy; and he never did, nor would he ever, countenance any act that was not strictly fair, honorable and just. He never knew how to do anything that was in the slightest degree treacherous or dishonorable towards any colleague, whether friend or foe. While I have to regret that, for a period of something like two years or more, he suffered in connection with this unfortunate conflict, I have to rejoice that he never in the slightest extent lost prestige, but rather gained strength—to such an extent that he became the strongest medical man in University circles, especially in the Senate and with the medical electorate. His position among his fellow-graduates was clearly indicated in the elections to the Senate, when he was elected at the head of the contest without the slightest effort on his own part.

It is only stating a small portion of the truth, however, to say that he was highly esteemed by his fellow-graduates. He was also highly respected by the graduates of other universities, and especially those of the University of Trinity College. I was often surprised to find that such a large number of Trinity's graduates had such thorough confidence in his ability as a diagnostician and therapist. At the time of his death he certainly occupied a remarkable position. He was generally recognized as the first physician in the Province of Ontario; and I think it would be quite safe to add that he was the most prominent physician in the Dominion of Canada.

The news of his death was a severe shock to his friends and

produced a profound sensation. Even those who held the most gloomy views respecting his condition had no idea that his end was so near. His many friends feel that through his death they suffered an irreparable loss. Such is the general opinion, both in a private and public way. While we have lost a friend, Canada has lost one of her brightest lights.

Dr. Graham was particularly fortunate in his domestic relations. His was ever a happy household until that dark day, the seventh of July, came. Deep grief is there now. We cannot properly share their sorrow, but we can at least mourn with them. Mrs. Graham, three daughters and one son survive. The latter, Mr. Joe Graham, has just completed his first year in medicine. He will continue his course in medicine, and the family will remain in Toronto for the present at least. The medical profession of Canada sympathizes with Mrs. Graham and her dear children in their sad bereavement.

LAWSON TAIT, F.R.C.S., ENG. AND EDIN.

Mr. Lawson Tait was one of the most remarkable men that our profession has produced. He was possessed of a singular individuality, a gigantic intellect, wondrous energy, indomitable pluck, aggressive pugnacity, and great skill as an operating surgeon. When I was in England in 1876 and 1877 I heard much about "that fellow, Tait of Birmingham." I found but few in London who had a good word to say about him. It was generally admitted, however, that he was an able surgeon, and universally acknowledged that he was the greatest fighter in the United Kingdom. I did not know his age then, and it was difficult for me to realize in later years that this man, who had at that time such a great reputation, was only thirty-two years old. He had, however, done a vast deal of abdominal surgery during the previous ten years, and had taken good care to let the world know what he was doing. He worked, and talked, and wrote after the manner of a physical and mental giant. He performed his first ovariectomy in 1868 when he was twenty-three years of age.

I first met Mr. Tait in Montreal, in 1884, at the meeting of the Canadian Medical Association, where he delivered an address, and was the lion of the hour. I was surprised to find then that his age was only thirty-nine years. I well remember him as he first appeared on the platform. The following sentence, from the obituary notice in *The British Medical Journal*, June 24th, coincides with the impression I then received: "To see him once was to remember always his short burly figure, his leonine head, his determined mouth, and his masterful ex-

pression." In his address on "Abdominal Surgery" he referred particularly to the extreme conservatism of the British people generally, and of British surgeons especially. He gave due credit to the work of John Lizars, Charles Clay, Baker Brown, Keith, Bantock, and others; but he waxed furious in all his references to Sir Spencer Wells. His remarks on ovariectomy, hysterectomy, and removal of the uterine appendages were well received, but his views respecting operation for purely subjective symptoms were adversely criticised. Sir William Hingston declared in the discussion that followed that he considered it highly dangerous to take some of Mr. Tait's rules for their guidance in cases where subjective symptoms only were present. He also took exception to his criticism on Sir Spencer Wells. Mr. Tait was slightly ruffled by Dr. Hingston's plain talk, and referred at the banquet, over which the latter presided, to two or three tilts which had occurred between them during the various discussions of the meeting; but he said that after these they were better friends than before, and then paid Sir William the compliment of saying that he, while speaking, reminded him of England's silver-tongued Paget.

Mr. Tait must have been an enormous worker for many years. I was much surprised to hear him say in his Montreal address that previous to that trip he had not taken a holiday for seven years. His teachings in abdominal surgery greatly influenced operators in all parts of the world—generally, but not always, for good. The most unfortunate result was that serious epidemic of oöphorectomy fever which spread especially throughout the United States and certain parts of Canada. That was partly due to the wondrous zeal and poor judgment of a large number of Mr. Tait's enthusiastic disciples, who went far beyond their master's teachings.

The following summary of Mr. Tait's surgical achievements, given by Mr. Christopher Martin in *The British Medical Journal*, will be found interesting:

1. "He reduced the mortality of ovariectomy almost to the vanishing point.
2. "He introduced numerous new operations, such as removal of the uterine appendages for myoma and for tubal disease, removal of a ruptured tubal pregnancy, drainage of a pelvic abscess by abdominal section, cholecystectomy, hepatoctomy, and the flap-splitting method of repairing the perineum.
3. "He introduced the plan of cleansing the peritoneum by flushing it with hot water, and of treating peritonitis consecutive abdominal section with purgatives instead of opium.
4. "He demonstrated to the profession most of what is known of the pathology of tubal inflammation and of ectopic gestation.
5. "He invented many new, and perfected and simplified

many old, surgical instruments. As examples I may mention his hysterectomy clamp, his ovariectomy trocar, his pressure forceps, his myoma screw, his gallstone forceps, his uterine dilators, his repositors for reducing inversion by the uterus, his glass drainage tube and sucker."

While Mr. Tait had many enemies, he also had a vast number of friends who fully appreciated the many admirable traits in his character. We quote as follows from the obituary notice before referred to: "No one could meet him without feeling the influence of his strong individuality, the vigor of his thought, and the originality and freshness of his views. He took part in many fierce controversies, both in the medical and lay press. He was a born fighter, he revelled in the joy of conflict, and would fling himself with all the ardor of his pugnacious nature into the arena of debate. And when he hit he hit hard. Yet under this rugged exterior and brusqueness of manner, his friends recognized a large-hearted kindliness. He was passionately fond of animals, and was exceedingly kind to the poor and afflicted; scores of poor women were admitted into and operated on in his private hospital absolutely free of charge."

There is something very sad about the history of the last few years of his life. In 1892 he suffered seriously from financial embarrassment. At the same time his health became impaired, and he soon showed symptoms of chronic nephritis, which finally caused his death. He was compelled to close his private hospital, to sell his collection of art treasures, and various residences which he possessed, and to retire to a large extent from practice. His friends noticed with sorrow that his disposition had changed, and that he became very irritable. Early in 1898 he removed to Llandudno, and went once a week to Birmingham to see patients in his rooms and do an occasional operation. He became suddenly seriously ill, June 3rd; uremic symptoms appeared, and he died June 13th, 1899, aged 54.

ROBERT BURNS POTTS, B.A., M.B.

Dr. Potts was a graduate in Arts and medicine of the University of Toronto; B.A., 1888; M.B., 1891. After graduating he commenced practice in Toronto, but a few years ago he removed to Hamilton, where he remained until the time of his death, which occurred July 11th. The remains were brought to Toronto, and buried in Mount Pleasant, July 14th. His age was only thirty-two.

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If some similar regulations existed in our own country, the profession as well as the public would be protected from the assaults of unscrupulous manufacturers, and many of the conflicting clinical results so often obtained by the physician would to a great extent cease.—*Medical Dial*, June, 1899.

Book Reviews.

The Anatomy of the Central Nervous System of Man and of the Vertebrates in General. By PROF. LUDWIG EDINGER, Frankfort-on-the-Main. Translated from the fifth German edition, by Arnfield S. Hall, Ph.D., M.D., Professor of Physiology in the Northwestern University Medical School, Chicago. Assisted by Philo Leon Holland, M.D., Neurologist Medical School, and Edward P. Carlton, M.D., Demonstrator of Neurology, Medical School Northwestern University, Chicago. Illustrated with 258 Engravings. Philadelphia, New York and Chicago: The F. A. Davis Company, Publishers, 1899.

When a strictly scientific work passes through five editions in a comparatively few years, there is good reason for supposing that it is one of merit. This can be said in the fullest sense of the word with regard to the present volume.

It is a matter of much regret that more attention is not paid to the anatomy and physiology of the nervous system by the general practitioner. A clear knowledge of these subjects is of the utmost importance in the making of correct diagnoses of many obscure cases. A work like this of Prof. Edinger meets every requirement in this regard.

The illustrations are well chosen and equally well executed, leaving little to be desired in the art part of the work. The type and paper are also good.

We can heartily recommend the work to all who wish to make themselves familiar with the intricacies of the central nervous system.

A Manual of Organic Materia Medica, being a Guide to Materia Medica of the Vegetable and Animal Kingdoms, for the use of Students, Druggists, Pharmacists and Physicians. By JOHN M. MAISCH, Ph.M., Phar.D., late Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. Seventh edition, with 285 illustrations. Revised by Henry C. C. Maisch, Ph.G., Ph.D., Professor of Materia Medica and Botany in the Medico-Chirurgical College of Philadelphia, Department of Pharmacy. Lee Brothers & Co., Philadelphia and New York. 1899.

This was an excellent work in its day, and has still many characters which should recommend it to students pursuing the study of materia medica. A perusal of the work at once convinces one that the late Professor Maisch must have expended



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a great amount of labor on its compilation. But unfortunately there does not appear to have been the same care exercised in its revision. We would suggest that at the next revision the revisor rearrange the whole work and make it in keeping with modern methods of teaching the subject. We would also suggest that more attention be devoted to remedies in every day use, and less to such ancient drugs as cockroaches, egg shells, oyster shells, bones, etc.

Sajous Annual and Analytical Cyclopedia of Practical Medicine. Subscription entire series only. Six volumes; one every six months. Cloth, \$5.00; half Russia, \$6.00. Monthly supplements sent free during the three years, Philadelphia: The F. A. Davis Company. Second volume, Dislocation—Infantile Myxœdema.

The third volume of this admirable series is to hand. We are more pleased with each volume. The quality of the articles and the completeness of references is if anything improving. There are three very interesting articles in this volume which will prove of great value in special cases: "Cretinism," by Prof. Wm. Osler and Dr. Norton, of Baltimore; "Goitre," by Prof. Adami, of Montreal; and "Exophthalmic Goitre," by Prof. Putnam, of Boston. While these articles are not of subjects commonly met with, one's ability to properly appreciate these cases when met with is much increased by a perusal of these very scientific articles.

An important article on a subject of the greatest practical value both to the patient and the physician is "Empyema," by Dr. J. McF. Gaston and Dr. J. McF. Gaston, Jr., of Atlanta. Drs. Gaston have paid very special attention to Empyema and its operative treatment. They have adopted a very radical procedure and the results have been admirable. The literature of the subject is finely reviewed and ably commented on. Dr. Stetnagon, of Philadelphia, has reviewed the subject of "Eczema," and has concisely put all the salient points of diagnosis and treatment. We do not think, however, that the article on "Formaldehyde" is by any means as complete as it should be. The subject warrants a very much more comprehensive reference than we find in this volume. We are pleased to note the attention paid to the therapeutic agents, Gelsemium, Cocaine, Exalgine, Hyoscine, etc. The article on Hypnotism is well worth perusal and thought. Dr. Reginald H. Sayre's article on "Hip Joint Disease" is very elaborate and complete. It is freely illustrated, and the experience of the present Sayre and his illustrious father are such that he speaks with authority based on practical experience. The volume is an acquisition.



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Selections.

The Appearance of the Typhoid Bacillus in the Urine.

Schichhold (*Deutsch. Archiv. f. klin. Med.*) examined the urine of a number of typhoid patients, and in contradistinction to other investigators, who found typhoid bacilli in the urine when the kidneys were healthy, "recovered the organism only in those cases in which evidence of renal disease existed." They appeared shortly after the onset of the kidney trouble, and lasted well into the convalescence. They appeared to be highly virulent, so the disease may be transmitted through the urine. In such cases of "nephro-typhoid," the danger of infection, for the attendant, should not be underrated.

Physiological Effects of Castration in the Male and Female.

A great deal of speculation has found expression in contributions to the study of the physiological effects of castration in the male and female, but, in truth, it is fundamentally erroneous to treat the two operations as if they had anything in common. The ovary is not a gland like the testis, and it is hardly likely, therefore, that the former possesses any internal secretion akin to that which is held to be furnished by the testis. The loss of this internal secretion in the male is credited with the production of more or less marked depression, which not infrequently culminates in melancholia. In the female, on the other hand, the functions of the ovaries which call for removal have generally long since fallen into abeyance, so that the ablation of functionally inactive organs is not likely to entail any corresponding constitutional disturbance. With regard to the sexual appetite, its preservation or otherwise must greatly depend upon circumstances. The loss of the ovaries in an unmarried female usually leaves the sexual appetite undeveloped, whereas in a married woman the nervous system has received previous impressions which may keep awake and prolong the period of sexual activity. The same thing holds good in males. If the testicles are removed before puberty no sexual appetite is developed, but if what we may call the sexual habit has been formed the nervous system reacts to certain stimuli as a matter of routine, even though the original essential stimulus is wanting. After all, these are details of no practical importance, because the conditions which call for castration on the one hand and removal of the ovaries on the other are always such as to render the question of sexual appetite a point of more than secondary importance.—*Med. Press and Circular*.



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The Treatment of Falling of the Hair by Simple Irritation.

Jacquet, in *La Presse Médicale* for December, 1898, says that irritation is the basis of all treatment of alopecia. Mechanical irritation he regards as quite as efficient as chemical. For this purpose he uses a stiff brush, with which the affected area is vigorously irritated, the effect being carried to a point just sufficient to produce simple hyperemia, but without inflammation or exudation. The applications should be made from four to six times a day.—*Medicine*.

The Surgical Treatment of Dropsy.

The difficulty of evacuating fluid from the cellular tissue of dropsical patients is very considerable. Simple incision has long been employed for that purpose, but the danger of infection is very great. The dropsical fluid forms an excellent culture medium, and the infection once beneath the skin and well distributed into the cellular tissue breeds very rapidly and not infrequently ends fatally. An aid to this process is furnished by the weakened resistance of the patient and by tissues that have long been distended by dropsical accumulation.

Recently, Borgherini (*Deutsche Arch. für Klin. Med.*, Bd. 61) has devised a plan based upon an old method, but one which seems to meet surgical indications in these cases. The dropsical limb is first made surgically clean, being scrubbed with soap and water, then with alcohol, then with an antiseptic. After this, four incisions are made—two in the calf and one over each malleolus. Over this an aseptic gauze dressing is applied, and it is all held loosely in place by a sterilized rubber bandage. The rubber bandage is left open at the heel, from which the water drains into a basin, the patient sitting on the edge of the bed or in a chair with the feet down. The dressings are changed each twenty-four hours.—*Medicine*.

Infantile Diarrhea.

In the serous variety Dr. Bucknum, of Denver, had learned to rely greatly upon the following:

R Acid. salicylic	3 ss.
Cretæ precip.	gr. x.
Syr. zingiberis	f 3 iv.
Aqua distil.	q. s. ad. f 3 ij.

M. Sig.: A teaspoonful every hour until the the bowels are under control.—*Colorado Medical Journal*.

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The recent regrettable case of poisoning by Carbolic Acid in a Toronto hospital, by which a patient was killed, calls attention to the folly of continuing the use of such a dangerous drug when a better and less costly, but *perfectly harmless* one, is to be had.

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Miscellaneous.

A USEFUL PRESENT.—W. K. Warner & Co., of Philadelphia, New York and Chicago, are distributing free to doctors and druggists, a very complete list of drugs, giving apothecary and metric doses. They are arranged in convenient columns and printed on coated linen cloth, size 22x14, for hanging at the prescription counter or in the doctor's office for ready reference. It will be sent to any doctor or druggist upon request. Drop them a postal for it.

A French medical journal tells the following story : A young woman conceived an ardent passion for a youth, who in turn refused to marry her. She then charged him with forcible violation. A surgeon who examined her found the hymen ruptured and blood on her linen, but no sign of the violent encounter she alleged had occurred. Investigating somewhat further, he found in the vagina a hen's egg, which could only be removed after breaking the shell. If the egg had been fecundated and it had been allowed to take its course to maturity uninterrupted in the vagina, there is no telling what interesting questions in legal teratology would have arisen.—*Medical Age*.

A. A. Marks, 701 Broadway, New York, will welcome your request for their book of over 500 pages with reference to artificial limbs. The book is a treatise on prothesis, in contradistinction to a catalogue. It is a dissertation on stumps, deformities, and the manner in which dismembered bodies are repaired by prothesis. The book is abundantly illustrated, in order to give clearness to the text.

The cuts are made from photographs taken from life, and the book, for the sake of convenience, has been divided into four parts : The first relates to artificial legs ; the second to artificial arms ; the third to general information of interest to the medical and surgical professions ; the fourth contains indorsements from the medical and surgical professions, testimonials from the wearers and other sources.

The article on the advisability of applying artificial limbs to growing children and to the aged must be of interest to those who are concerned in the welfare of the dismembered youth and those in the decline of life. The article on the longevity of the maimed has been carefully prepared from reliable data.

The attention of the medical and surgical professions is called to the articles on "Amputation Prothetically Considered" and "Relation of Surgery to Prothesis." Comments on the author's views on the above subjects are invited.

The Canadian Practitioner and Review.

VOL. XXIV. TORONTO, SEPTEMBER, 1899.

NO. 9.

Original Communications.

THE HOME TREATMENT AND PREVENTION OF PULMONARY TUBERCULOSIS.*

BY T. F. McMAHON, M.B.

Professor of Medicine Ontario Medical College for Women ; Physician to the Toronto
General and St. Michael's Hospitals.

The sanatorium treatment of pulmonary tuberculosis is as yet, and for many years must remain, unattainable by the vast majority of patients. We have now to consider: (1) How shall we prevent the patient treated in his own home from communicating the disease to others? (2) How shall we deal with susceptible individuals so as to minimize the danger of their becoming infected? and (3), Having contracted consumption, what means shall be taken to cure the disease or stay its ravages?

The measures for the prevention of tuberculosis fall naturally under two main heads—first, those for the destruction of the germ or for the prevention of its entrance into the body, and second, those directed to the maintenance of the nutrition of the individual at the highest possible standard. Without the specific germ there can be no tuberculosis, and the germ cannot flourish unless it fall upon good soil. The main sources of infection are two: (1) The sputum, and (2), infected food. We may safely take it that it is the susceptibility and not the disease itself that is often inherited.

The prompt destruction of the sputum would go far towards blotting out the disease, removing as it would the most common factor in its dissemination.

*Read at the Ontario Medical Association, 1899.

Nuttall tells us that a tuberculous patient may expectorate at a moderate estimate, from two to four billions of bacilli in twenty-four hours. The sputum quickly dries, and the dried bacilli are spread broadcast. The public generally and tuberculous patients especially must be educated to a due appreciation of this fact. The risk of infecting even nurses and attendants is slight, if proper precautions are taken. This involves much thoughtfulness and care. It is almost impossible to abolish the handkerchief, but with the shaking out of a filthy handkerchief on which tuberculous sputum has dried, millions of the bacilli are thrown into the air to be inhaled, perchance, by susceptible persons. Instruct your patients, then, never to spit on the floor or handkerchief. The danger from spitting on the ground in the sunlight is not so great, but even this must be avoided in the streets of our cities and towns. The sputum should be received into proper spit-cups containing a suitable disinfectant, and finally thrown down the water closet or thoroughly destroyed by boiling. The mouth may be wiped by rags which must be promptly burned or boiled. That the danger from dried sputum on handkerchiefs is a real one is shown by the frequency with which the women who shake out and wash the handkerchiefs of tuberculous persons at health resorts contract the disease.

When consumptives mix with the public, they should be required to carry a spit-cup, and spitting in public conveyances, hospitals, halls, churches and other public places should be made an indictable offence.

The breath of a tuberculous patient is not a source of any considerable danger, but Flügge's experiments convinced him that the expulsion of fine drops of saliva and mucus containing bacilli, during coughing, constituted a real danger. He says that intimate association with coughing consumptives, especially when one frequently approaches the patient nearer than one metre, is dangerous.

I always instruct my patients that dried sputum is a source of danger not only to others, but also to themselves, by infection of previously healthy portions of their own lungs. Selfishness is the mainspring of human conduct, and there is no surer way of making a man careful than to bring into play the instinct of self-preservation. Another important instruction is that rooms in which consumptives live should be dusted with damp cloths.

Every possible means of educating the public concerning these dangers should be utilized, and the distribution and proper care of spittoons containing water or a disinfectant solution to prevent the drying of the sputum in public places, schools, factories, etc., should be encouraged. The Government

and Health Boards must take the question up in earnest. Insistent and persistent reiteration of the facts that consumption is (1), communicable; (2), preventable, and (3), curable, will in time bear fruit, and without education of the public all our efforts will be in vain. Posters setting forth the main facts and forbidding improper spitting, should be put up in factories, schools, churches, and other public resorts, and a vigorous newspaper propaganda should be carried on. The Health Boards should require physicians to report tuberculous cases in order that patients and their friends should be supplied with literature setting forth the dangers and the best method of meeting them. Premises occupied by a consumptive and vacated by removal or death, should be made fit for further occupancy under the supervision of the Health Boards.

For efficient prevention and successful treatment, an early diagnosis is absolutely necessary, and this would be greatly facilitated if our Health Boards would examine sputum free of charge. Bacteriological examination is quite as important in pulmonary tuberculosis as in diphtheria, and comparatively few physicians are equipped to make it.

The association of consumptive patients with others in our public hospitals, and the totally inadequate measures taken to prevent the spread of infection, are notorious and scandalous. Consumptives should not be treated in the same wards as others in public hospitals. It is bad for the patients and bad for the public health.

Next in importance to proper disposal of the sputum is efficient inspection of our milk and meat supply. Governmental inspection of dairies and systematic use of the tuberculin test would go far towards removing this danger. But time will not permit me to make more than this short reference to this branch of the subject.

The dangers of infection from tuberculous domestic pets, such as birds, cats, etc., must not be forgotten. Some authorities discountenance the keeping of such.

Efficient measures having been taken for the disposal of the sputum, and for the securing of a pure food supply, there are other considerations of equal importance. The germ of tuberculosis we shall probably always have with us, so we must take all possible precaution that it fall not on good soil. The improvement of the conditions under which people live and the maintenance of the health of the individual at the highest possible standard, are the best preventatives. An abundance of fresh air and sunlight in our homes and workshops, a sufficiency of cubic space, especially in sleeping apartments and work-rooms, clean and dustless streets, proper disposal of sewage and garbage, good food and clothing, and as much open-air

exercise as it is possible to secure, are among the general measures that commend themselves to all.

Individuals specially predisposed to tuberculosis by heredity or otherwise should receive particular attention. Their food and clothing, their occupation and manner of living should be carefully supervised. If the family physician would make it his duty to watch out for badly formed chests and faulty breathing, he could do much to minimize the dangers. Adenoid vegetations and enlarged tonsils should be removed in order that there should be a free entrance of properly warmed and filtered air to the lungs. The experience of orthopedic surgeons with systematic physical training and deep-breathing exercises, shows how much can be done in increasing the lung capacity of narrow-chested, stoop-shouldered, shallow-breathing young persons. The tight-laced young lady who thinks it vulgar to romp, never expands the apices of her lungs, and the enterprising tubercle bacillus finds them admirable places for rearing his large and voracious family. Every precaution should be taken against cold-catching, and the convalescence from diseases involving catarrhal conditions of the respiratory tract should be carefully guarded.

For an individual predisposed to tuberculosis to choose a sedentary occupation is to court disaster. For him, large, well-ventilated living and sleeping apartments, and such amusements and occupations as will involve a large amount of out-door life are especially desirable.

In the prevention of consumption, as in its treatment, the great desideratum is "air, air, more air." Nor must we neglect the prompt attention to dyspeptic and anemic conditions so often the forerunner of tubercular infection.

Treatment.—In the time at my disposal I shall not be able to do more than sketch the general measures advisable. I shall not attempt to enter into the treatment of special symptoms.

The cure is altogether a question of nutrition, and if this is maintained, the disease usually shows a tendency to spontaneous cure. But before saying what ought to be done allow me to first take most vigorous exception to the utterly indefensible treatment which is even yet so common. The patient will clamor for cough-mixtures. You might as well put a man on a hand-sleigh on an icy hillside and expect to see him soon arrive at the top, as to expect a consumptive to make any progress whilst taking opiate cough-mixtures.

In our home treatment of tuberculosis the nearer we approach the methods of the sanatoria the more satisfactory our results will be. The only method of treatment worth discussing is the open-air method. Other measures may prove useful adjuncts, but without pure air and sunlight they will be of little avail.

Seven years ago I had a patient who had extensive infiltration of the upper lobe of the right lung, and a small deposit in the apex of the left. He had fever, night-sweats and hemorrhages, and was rapidly losing flesh. I advised him to throw up the indoor occupation at which he was engaged, and as it was necessary that he should gain a livelihood, take up some outdoor occupation. He bought a horse and cart and took a position as overseer of extensive building operations in various parts of the city. He spent ten or twelve hours a day in the open air and slept in a large room with the window wide open, winter and summer. He took creosote in fair sized doses, as well as such tonics as arsenic, strychnia and hydrochloric acid. He ate four meals a day, and there was no restriction on his diet except that he was instructed to use meat (including fats) and eggs very freely. He commenced to improve at once, and within a few months had gained fifty pounds. He has had no cough for some years, the lung is healed, and notwithstanding a recent attack of inflammatory rheumatism, looks the picture of robust health and weighs 228 lbs. I have had similar experience with some others. Even advanced cases with cavities have shown remarkable improvement. One young man who had been confined to the house for months, and whom I at first expected to die within a month, gained thirty pounds, and was in fair health for a year, when an acute outbreak quickly carried him off. Before I adopted the open-air treatment I never saw a single case of pulmonary tuberculosis get well. The patient should, when in the house, occupy the room with the most sunshine. If the temperature is 100° F. or over, he ought to rest in the summer on a hammock or couch in the garden—in the winter wrapped up in blankets, with a foot-warmer under his feet, on a couch or chair on the veranda, or other sheltered place. Nothing must be allowed to interfere with a full exposure to fresh air for from six to twelve hours daily. The air of the mountains and forests is, of course, purer, and therefore better than that of the crowded city, but we are now discussing the home treatment, and must take the home as we find it, and climatic considerations need not be discussed.

Of specific treatment I need say but little, as none of them have as yet given uniformly satisfactory results.

The condition of the digestive organs and the diet are of the greatest importance, and but little progress can be made until digestion is put upon a satisfactory basis. It is worse than useless to stuff a weak stomach with strong foods. Rest in the open air, or better, a change of air will usually improve the digestion, if the diet is for a time restricted to milk, butter-milk or kumyss, with meat juices or egg albumen. If this fail it may be necessary to resort to forced alimentation through

a stomach tube, after washing out the organ with cold water. Excellent results have been obtained from this procedure in the sanatoria, and it is a method which is too much neglected by the profession. Among medicinal agents, tonics and aids to digestion occupy the first place, but we must be careful that in striving to do a little good, we do not do a great deal of harm. Cod-liver oil, when it agrees perfectly, is undoubtedly useful and the arsenic, strychnia and the mineral acids sometimes yield good results. But, of all the drugs I have used the best results have followed the administration of creosote. It lessens the cough and fever, and in many cases appears to have an excellent effect on digestion. The mistake is often made of giving it in too large doses, which disagree with the stomach and lead to a total abandonment of the drug. With regard to treatment by inhalations I find the reports very contradictory. Personally, I have seen but little benefit therefrom. Any treatment having the charm of novelty is apt to inspire hope and confidence in the patient, and, knowing as we do the triumphs of suggestion in therapeutics, we ought to take full advantage of its aid.

THE ROLE OF WOUND INFECTION AS A FACTOR IN THE CAUSATION OF INSANITY.*

BY A. T. HOBBS, M.D.,
Asylum for Insane, London, Ont.

The introduction of the microscope in the minute analysis of pathological tissues and in the discovery and differentiation of atomic germs is rapidly revolutionizing the etiology of disease. The patho-bacteriologist, by his researches, has shown how prominent a factor the micro-organisms are in causing the many physical ills that affect and decimate the human race. Furthermore, we are beginning to estimate the potency of these organisms and their products in the frequent production, directly or indirectly, of many cases of mental alienation.

THE GERMS OF WOUND INFECTION.

The bacteria usually found in wound infection are: (1) The streptococcus pyogenes, (2) the staphylococcus pyogenes, (3) the micrococcus gonorrhea, (4) the streptococcus of Fehleisen, (5) the saprophytes.

There are other bacteria found in wounds, but the above mentioned are the germs mostly concerned in wound infection.

Not only do the bacteria themselves act as a virus, but their chemical products—toxine and ptomaine—possess a specific virulent action when absorbed into the body.

WOUNDS USUALLY INFECTED.

1. Small abrasions, or incised wounds, or contusions on the face or on the scalp, usually subject to neglect.

2. Lesions of the genital tract entailed by maternity, such as perineal tears, bruising and contusions of the vagina, laceration of the cervix uteri, and the raw placental site in the puerperal uterus.

These wounds are the favorite portals through which the germs or their virulent products find entrance into the lymphatic or circulatory channels and thence distribute themselves throughout the system.

EFFECT OF INFECTION UPON THE CONSTITUTION.

Action of infection upon the central nervous system is brought about directly through its circulation. The contaminated blood filtering through the capillaries is absorbed into the cellular and ganglionic structures, bringing about abnormal changes in their protoplasmic elements, varying from cloudy

* Read before the American Medico-Psychological Association at the 55th Annual Meeting in New York, May 23rd, 1899.

swelling to distinct pigmentation. These noxious elements disturb the harmony of their exquisitely balanced functions, interfering with the infinitesimal chemesis so necessary to the production of rational action and thought.

The indirect action of the infection upon the central nervous system occurs through the disturbance of the organic mechanism engaged in the digestion of food. The effect on the functions of the alimentary tract by the toxic material is to lower the nutritive qualities of the ingesta, and, therefore, the blood plasma, upon which the brain, like other organs, is dependent for the maintenance of its vitality. Also, the infected blood current, circulating through the capillaries of vaso-motor centres, irritates these centres, and disturbs through them the equilibrium of the cerebral circulation, thereby enhancing the intoxication already produced in the centres of thought and reason. Furthermore, if in the infected patient there exists a prior condition of heredity, the effects of the toxemia are intensified. Is it then to be wondered at that such a delicately poised organ as the brain should show the various phases indicative of mental disquietude, ranging from hebetude or delirious muttering to the intenser or graver forms of melancholia and mania?

EFFECTS OF INFECTION LOCALLY.

The effects of infection locally upon the wound or the tissues in its immediate vicinity are governed by the locality of the injury. Superficial wounds of the body, especially of the face and head, are easily amenable to treatment, and, as a rule, resolution is rapid. Injuries, however, of the genital tract, from its situation, and especially if located in or around an organic structure, are more difficult of amelioration. Pathological processes in uteri often embrace the whole organ, owing to its extreme vascularity, and by extension or penetration may easily implicate the adnexa or other pelvic contents. Thus, to the burden of infection in puerperal cases, are added inflammatory lesions, which often of themselves wreck the future health of the individual.

THE INSANITIES FOLLOWING INFECTION.

1. Erysipelatous insanities. A study of eight cases of insanity traced to the infection of the streptococcus of Fehleisen shows that the insanity may occur during the attack of erysipelas, or may follow the subsidence of the infection. They were all of the maniacal type, ranging from mild, paroxysmal mania to acute, violent mania, and which, in some cases, merged into a condition of chronic mania. Three, who became insane during the attack, recovered, one mentally improved, one died three

months after the attack, and the remainder became chronically insane. None of the types of erysipelas in these cases were of phlegmonous nature, and the local inflammation made the usual resolution.

2. The septic insanities of the puerperium. These embrace a larger field. For convenience they may be described under three heads:

(a) Puerperal insanity, with little or no local lesion, caused by septic infection.

The insanities from this origin occur probably from absorption into the circulation of the toxins of an infected clot, either through the placental site or some tear or abrasion, or by the absorption of the ptomaines of the saprophyte germ, which finds lodgment in the detritus of a puerperal uterus.

The majority of these cases, being of short duration, recover at their homes on elimination of the poison. They are usually of a mild contusional type or a form of muttering delirium.

(b) Puerperal insanity complicated by gross local lesion, the result of septic infection.

The insanities of this class are usually of a more serious character than those of the former. The local inflammatory lesion acts as a focus, keeping up the prior intoxication by distributing a continued supply of the virus to the already poisoned circulation of the patient, or by reflex irritation. The majority of these patients do not recover the normal mental condition under ordinary systemic treatment.

The study of the histories of ninety-eight cases admitted into the London Asylum since the year 1870, in which the alleged cause was given as the puerperium, discloses that just one-half, or 50 per cent, recovered reason. It is fair to suppose that very few of these had any serious local lesion complicating their insanity, as some recovered very soon after their admission. I have been able to examine gynecologically twenty-three of these ninety-eight cases. In twenty-two of them were lesions ranging from subinvolution to complete agglutination of the pelvic organs. This would indicate that over 90 per cent. of these cases had some complicating pelvic lesion. Suitable surgical measures being adopted in twenty-one of these resulted in the mental recovery of eight cases and in the improvement of four, while nine remained unimproved. The eight recoveries were included in the 50 per cent. before-mentioned total recoveries in the puerperal cases.

I may say that seven of the nine who failed to show any mental improvement subsequent to any surgical treatment had been insane for periods of from two to sixteen years.

(c) Post-puerperal insanity, induced by pelvic disease, the latter being the result of septic infection.

It is now generally recognized by obstetricians and gynecologists that a severe local sepsis may occur in the genital tract during the puerperium with apparently little systemic disturbance. This condition often escapes the notice of the accoucher, and, as a result, a prolonged and partial convalescence only ensues. The puerperal woman, on leaving her bed, has a constant feeling of malaise. The combination of pelvic disease, the main fact of causing the incomplete convalescence, together with the futile attempts to perform the duties of a wife and mother, ultimately result in a complete breakdown mentally and physically. This unfortunate sequela to the puerperium often occurs six, eight, or ten months, or even longer after the birth of a child, and which can be traced back to its puerperal source. Unfortunately, however, the physicians who fill and sign the commitment papers either are not in possession of the patient's previous history, or they fill out the forms very carelessly, giving very few, if any, facts of the prior health of the patients to be admitted. Alleged causes, like overwork, mental strain, or worry are usually assigned as the exciting factor, and in many histories a negative answer only is given. For these reasons I think it imperative that the history papers, when issued for the admission of an insane woman to an asylum, should have attached a slip containing certain leading questions, bearing upon the reproductive organs, to ascertain a fuller and more satisfactory history of the previous health of the patient in this respect. We would gain additional and valuable information which is rarely given in the usual insanity certificates. If the history then pointed strongly to the presence of lesions in the genital tract, and such be demonstrated, timely and invaluable treatment could be adopted, and mental and physical recovery very much accelerated.

During the past four and a half years we have, at the London Asylum, endeavored to secure from the friends of the incoming female patient and the family physician an account of the previous diseases (if any) the patient suffered from, and especially all the facts concerning the number of children and the history of the different puerperiums. Having this information to hand, we are then able to decide whether or not to make a gynecological examination of the insane woman.

We have, to date, examined 187 women—recent admissions and chronic patients—and found distinct pathological lesions in 163. Of the 163 there were no less than eighty who had inflammatory lesions of the pelvic organs that were, so far as we could judge, brought about by septic invasion at the time of a puerperium. All of these eighty women had marked subinvolvement or chronic metritis, and forty-two had complicating

diseased cervixes. Some thirty-three had retro-displaced uteri, and nineteen had more or less seriously lacerated perineæ. In addition, eleven had inflammatory tubal or ovarian disease, three had fibroid tumors, and one a deep rectal fistula.

Subsequent upon suitable surgical treatment of these eighty cases we had return to physical health in nearly all, and thirty-six, or 45 per cent., recovered mentally, and twenty, or 25 per cent., had mental improvement, while the mental condition of the remaining twenty-four, or 30 per cent., remained stationary.

From this it is evident that, if septic infection is mainly responsible for the production of inflammatory conditions of the pelvic organs, occurring during the puerperium, and that so large a percentage of mental recovery and improvement succeeded the removal of these lesions, it strongly emphasizes how important a factor the micro-organism is in thus directly or indirectly being the cause of many a case of mental alienation. Moreover, it teaches these lessons, that too great care cannot be adopted by the accoucher in conducting a female through the really dangerous period of the puerperium and protecting her from sepsis; and to those having the care of the female insane, that the removal of inflammatory lesions of the pelvic organism when found, opens up a possible avenue of escape from mental thralldom of these unfortunate exiles of humanity.

ELECTROLYSIS AND CATAPHORESIS IN THE TREATMENT OF INOPERABLE AND RE- CURRENT MALIGNANT DISEASE.

BY R. N. FRASER, M.D., C.M., M.R.C.S. (ENG.), THAMESVILLE, ONT.

In connection with a consideration of the treatment of malignant disease, I wish to-day to report the history of a case in which apparently a favorable result has been secured after repeated failures.

I am not aware that any case has heretofore been reported in Canada in which a similar plan of treatment was adopted, and I shall therefore endeavor to give you details as far as time will permit, so that you may have an opportunity of judging for yourselves both as to the malignancy of the disease and as to the part played in the treatment by each of the means employed.

The patient was placed under my care on the 16th of December, 1896, with the following history:

F. G. A., aged 40, married, druggist. Family history good. Health previous to beginning of present trouble had been good. Had an attack of mumps in 1883, with orchitis, followed by partial wasting of the testicles.

During the fall of 1894 he occasionally noticed slight soreness in the right testicle, particularly after being much on his feet. He paid little attention to this until September, 1895, when the attacks became more pronounced, occurring about once a month, lasting two or three days, and being accompanied by some enlargement which did not completely subside between the attacks.

In July, 1896, he went for a two weeks' holiday trip on his wheel. The testicle at this time felt heavy and was somewhat sore, but the saddle of the bicycle seemed to support it, so that riding was not uncomfortable.

Ten days after returning from the trip, that is, in August, 1896, the testicle became much enlarged, and pain became almost constant, though not very severe. The enlargement gradually increased, and after two or three weeks he consulted his physician, who diagnosed hematocele and withdrew $\frac{3}{4}$ ss. of blood through a hypodermic needle, without, however, lessening the size of the testicle or giving relief to the pain. The operation was repeated with an aspirator needle, and again with a cannula and trochar, with no better result.

Septic inflammation followed, which made it necessary to lay the scrotum freely open. A large opening was also made about the situation of the external abdominal ring. Most offensive

pus and foul gas were in this way liberated, the cellular tissue being found gangrenous. A few hours later further incisions were made, extending along Poupart's ligament and the crest of the ilium.

The scrotum was found to contain a tumor which was so much decomposed and burrowed into as to be quite unrecognizable, and this was not removed. The wounds were packed with iodoform gauze, and the patient made a good recovery, but the testicle remained large, and becoming adherent to the scrotum fungated through the openings. It was therefore removed on October 16th, after which the wounds healed nicely.

The testicle was sent to Dr. J. Caven, of Toronto, for microscopic examination, and he pronounced the case one of cystic sarcoma.

I found upon examination the patient apparently in good health and well nourished, a cicatrix extending from the lowest extremity of the scrotum to a point a little above and behind the anterior superior spine of the ilium. This was somewhat dense throughout. Just below the external abdominal ring there was a small rounded tumor about the size of a filbert seemingly attached at its upper extremity, and adherent to the cicatrix.

On December 17th I cut down upon this tumor and found it attached to the cord, which was therefore amputated and the tumor removed. This was sent to Dr. H. B. Anderson, of Toronto, who, after microscopic examination, pronounced it a small round-celled sarcoma.

The wound healed by first intention, but the cicatrix remained thickened and hard, and early in January, 1897, a small rounded tumor could again be felt just below the site of that formerly removed. This also was adherent to the cicatrix, which was much infiltrated.

On January 22nd this little tumor had attained the size of that removed a month before, and, despairing of success by operation, I began treatment of the case by Dr. W. B. Coley's method of injecting a mixture of streptococcus and prodigious toxins. Dr. Coley himself very kindly gave me the benefit of his advice, and supplied me with the toxins prepared according to his directions. While, however, he advised a trial of this method, he stated that he had not had very gratifying results in such cases.

Beginning with a half minim the dose was gradually increased to fourteen minims without getting any very severe reaction. Bloody serum began to come away on January 30th through two of the needle punctures which had opened up, and these openings enlarging, the tumor soon began to fungate and

bleed. I therefore stopped the use of the toxins, and on February 8th, as a palliative measure, removed the growth, which was about the size of a walnut, and was attached to the cord. The cord was amputated as close to the internal ring as possible. The tumor was sent to Dr. H. B. Anderson, who pronounced it carcino-sarcoma.

A month later a small recurrence could again be distinguished, and I resumed the toxine treatment on March 19th, continuing until the 31st, sometimes getting a good reaction and sometimes none at all, but the tumor continued to increase in size until April 12th, when it had assumed an elongated shape about an inch in its transverse diameter, extending from a little above the external abdominal ring to the lowest part of the scrotum and infiltrating the cicatrix nearly as far as the spine of the ilium. Several small blood cysts had formed just beneath the skin, and two of these having given way the tumor was beginning to fungate.

I therefore again removed the whole mass, cutting as wide of diseased tissue as possible, excising the infiltrated cicatrix and again cutting the end of the cord. A small portion of this wound filled in by granulation.

No treatment whatever followed this operation until May 20th, when two small nodules were removed from just beneath the pubic arch, the perineal muscles being laid bare in the operation. At this time that part of the cicatrix about the external abdominal ring was much thickened, but was not removed.

Early in June, 1897, I learned through one of the medical journals that Dr. J. McFadden Gaston, of Atlanta, Ga., had read a paper before the American Surgical Association at Washington, advocating electrolysis and cataphoresis in cases of inoperable sarcoma. As I could not get a report of his case so early I wrote him for information, and he very kindly sent me the written copy of his paper. This paper was afterwards published in the *Annals of Surgery*, for August, 1897, and in it Dr. Betton Massey's independent work along the same line was duly acknowledged.

The case which he then reported was that of a boy, aged 12, who had suffered from a growth in the hypogastric region. An exploratory incision had been made by Dr. J. B. S. Holmes, when sarcoma was found with such adhesions as to preclude removal by the knife, and the incision was closed.

Dr. Hunter McGuire, of Richmond, Va., afterwards examined the case, reopened the incision, had the tumor subjected to microscopic examination, and declined operation. Dr. M. D. Hodge, jun., of Richmond, upon microscopic examination, pronounced the tumor a small, round-celled sarcoma.

After this the patient was placed under the care of Dr. Gaston, on November 17th, 1895, and he, as a last resort, placed him upon the following treatment: Donovan's solution in 8-drop doses was administered three times a day, with succus alterans as a menstruum. Electricity was used as follows, a twelve-celled battery being employed: A needle representing the positive pole was introduced into the substance of the right side of the tumor, and a sponge electrode, representing the negative pole, was placed on the left margin. At first only six cells were connected and the seance lasted five minutes. This was continued daily at first, and afterwards every second or third day, while the time was gradually increased to ten minutes, and more cells were brought into the circuit. The punctures were made about half an inch apart, going around the outer border of the tumor. Later the needle was used on the negative pole, and a small piece of cotton, moistened with Donovan's solution, was placed under the sponge on the positive electrode, and after the punctures had encircled the tumor the needle was replaced by another sponge electrode. Under this treatment the tumor gradually lessened; cachexia disappeared; the boy returned to school, and on May 1st, 1897, presented no trace of disease of a local or constitutional nature.

On June 24th, 1897, the condition of my patient was as follows: Total length of cicatrix, sixteen inches, of which the lower eight inches was considerably infiltrated, the lowest five inches being much thickened and hard, and the infiltration extending for more than an inch and a half in breadth at the external abdominal ring. At the side of the scrotum a small rounded tumor could be felt, and there was some puffiness in Scarpa's triangle, together with slight enlargement of the glands. The malignant growth had been five times removed within eight months, and a very positively unfavorable prognosis had been given by each of several physicians who had seen the case with me and had assisted at the operations.

Following Dr. Gaston, I prescribed Donovan's solution in 8-drop doses with teaspoonful doses of succus alterans, and began the use of electricity with a twenty-celled battery. I had no means of estimating the strength of the current other than the manifestations of pain on the part of the patient and throughout the treatment I connected just as many cells as he could well bear, the number ranging from six to twenty, according as to whether they had been recently filled or not.

I just passed a needle connected with the negative pole into the side of the cord-like cicatrix beneath the pubic arch, while a sponge electrode, about two inches in diameter, and moistened with salt water, was placed above the external abdominal ring and connected with the positive pole. Under this sponge was

placed a small piece of absorbent cotton, saturated with Donovan's solution. Six cells were connected, and the seance was continued six minutes.

The usual bubbles of gas and serum escaped alongside the needle, and a number of vesicles and pits were produced under the cotton. This procedure was repeated on four successive days, after which the needle was replaced by another sponge electrode, and the time was increased to ten minutes. The same vesicles and pits were produced under the positive pole, but no effect was noticeable under the negative. This treatment was continued daily until July 8th, and afterwards every second day. The needle had caused considerable thickening at the points of puncture, so that the tumor appeared larger in its lower part, but the infiltration of the cicatrix above seemed slightly lessened.

On July 14th the tumor was nearly as large as a walnut, and a couple of soft bluish spots indicated the presence of blood cysts. I therefore passed the needle into and through the whole length of it, connected this with the negative pole, and turned on a good, strong current for ten minutes, the positive electrode being placed above the pubis.

This was followed in three or four days by the sloughing of the destroyed tissue, and an open wound remained. The sponge electrodes were again applied, one on either side of the wound, and after a week soft gelatinous matter could be squeezed out of it, while pieces of softened or necrosed tissue came away at each dressing. I scraped away a quantity of this softened tissue with a spoon curette, but there remained a hardened zone, perhaps a third of an inch thick, all around the wound.

The hardness about the external abdominal ring was now certainly less marked, and many divisions could be felt in it. The cicatrix above this had become quite soft, and the puffiness in Scarpa's triangle had disappeared. The cicatrix was also less adherent to the pubis at the side of the penis.

I now packed the wound with absorbent cotton, saturated with Donovan's solution, and passed the current through it. This cauterized the surface, but the effects did not reach far enough to destroy the growth, which continued to increase in thickness.

On August 17th, two zinc needles, coated with mercury, were passed into the tumor and connected with the positive pole, while the negative sponge electrode was placed at a little distance. This was repeated daily until the 21st, and then every second day until the 29th; but although small portions near the needles were destroyed the mass continued slowly to enlarge. The tumor was again removed by the knife, on August 30th,

and such adhesions were found as to necessitate a very careful separation from the urethra, and the removal of a small portion of the surface of the crus penis. The wound did not completely heal, a small sinus remaining.

Cataphoresis, with the sponge electrodes and Donovan's solution, was commenced again on September 6th.

A small nodule which was detected deep in the perineum on September 14th, was removed a week later, and this again was with great difficulty separated from the urethra and cut away from the crus penis, bleeding from which was controlled by forceps, while silk was used to ligate bleeding vessels. One of these ligatures was removed on December 12th from a sinus which had remained.

Cataphoresis, which had been interrupted by the operation, was again applied, December 10th, but in a few days another small tumor was detected, and by the 20th had attained the size of an almond.

On December 31st, 1887, a soft mass the size of a walnut, together with the adjacent cicatrix, which was hard and thickened, was removed. This time the tumor was attached to the perineal fascia, and very little healthy tissue was cut away. No large vessels were divided and no ligatures used (a fact which I am not sure did not contribute largely to the success of the case). Short stitches were used to bring the deep surfaces together, and the wound healed nicely by first intention. The stitches were removed on January 4th, but two days later the patient sat upon a vessel to have his bowels moved, and the cicatrix gave way. I at once put in a couple of deep sutures, and was fortunate enough to secure healing by first intention a second time.

Cataphoresis was resumed on January 24th, 1898, at which time the cicatrix was somewhat thickened. I now placed the positive sponge electrode, with the cotton saturated with Donovan's solution, near the cicatrix, while that connected with the negative pole was placed at some distance, and so that the direction of the current was through the former site of disease. This was repeated every second day, each seance lasting ten minutes. The cicatrix gradually assumed a more normal appearance, and since that time we have had no sign of a recurrence.

In May, 1898, I sent to Dr. Cullen, of Johns Hopkins Hospital, portions of the fifth, sixth and seventh recurrences for examination, and he pronounced the case adeno-carcinoma.

Since the last operation cataphoresis has been persevered with, applications being made twice a week, and the internal medication has been continued intermittently, the patient meanwhile pursuing his usual occupation. At the present

time he is in excellent health, cicatrices are all perfectly normal, and there is not the least sign of a recurrence though almost eighteen months have elapsed.

In a letter which I received from Dr. Gaston in April last, he informed me that the treatment of his patient had three months previously been suspended, and the boy was entirely free from any sign of disease; also, that since his report of this case he has had under observation some half-dozen others in which similar treatment was adopted, with, in some instances at least, most gratifying results.

Dr. G. Betton Massey, of Philadelphia, in a paper read before the American Medical Association, and afterwards published in the *Medical Record* of July 31st, 1897, gave the results of his experience in a series of eight cases of malignant disease tested by him up to that time by cataphoresis. Of these, six were carcinomatous and two sarcomatous. His summary of results was: two cured, two apparently cured, two benefited, of which one was hopeful, and two failures.

While, of course, it is too soon to speak of a cure having been effected in my case, the patient not having passed the three-year limit, yet I think it must be conceded that, taking into consideration the very malignant nature of the disease, as evidenced by the rapid recurrences and quick growth of the tumor, his condition to-day is in marked contrast with that when this method of treatment was adopted. I cannot, however, give all the credit to the adoption of cataphoresis and the administration of arsenic as I am convinced that we should have failed but for the use of the knife. On the other hand, I feel quite sure that the knife alone would not have given us the result we have attained, and this leads me to advocate as strongly as I can the combination of all the means at our command in combating this deadly form of disease.

Dr. Massey has in some cases destroyed the new growth by mercuric cataphoresis at a single application, leaving an open wound to fill in by granulation, but this could not have been done in my case without destroying the urethra, and it seems to me more rational to remove with the knife, getting rapid union, and reducing the process of granulation to a minimum, then to follow the operation by cataphoresis, as I have done, though I believe this is the first case reported in which such a course has been pursued.

In conclusion, I wish to say that my experience in this case would lead me to make the following suggestions:

(1) Electrolysis and cataphoresis, together with the internal administration of arsenic, are worthy of further trial.

(2) Not being incompatible with operative or any other plan of treatment, cataphoresis may be judiciously combined with

any other method in the treatment of a case in which success is not assured by that other method.

(3) No case, either of sarcoma or of carcinoma, should be abandoned as hopeless until the effect of this method has been tried.

(4) Removal of even a portion of the diseased tissue by the knife is indicated in any case in which rapid healing of the wound can be expected, thus lessening the work to be accomplished by electricity, and thereby hastening the cure.

(5) In such operations the greatest precautions should be observed in order to minimize the process of granulation and secure rapid healing, ligatures being avoided if possible.

(6) By an early recourse to cataphoresis recurrences may be prevented in many operable cases.

(7) If good results have been secured in cases otherwise hopeless, and in which this treatment has been adopted only after several months' trial and failure by other methods, surely much more may be expected if given a fair trial in a wider field and in cases in which the system has not already been injuriously affected.

MEDICINE IN GÖTTINGEN.

BY THOMAS McCRAE, M.B.

References to German methods and work are now so frequent that much interest is felt when the opportunity comes to study them personally. Medical work in Göttingen may be taken as fairly typical of that in the smaller places. It is a place of about 30,000 population, and the University, with over 1,000 students, is a very large factor. Work in Berlin or Vienna, of course, differs widely from that in the smaller places. For the latter it is claimed that a great advantage is the chance of personal contact between the professor and student. It has to be kept in mind that in Germany much work comes from cities where there is no teaching body, and from men who do not hold university positions. This is especially true of pathology.

The number of medical students in Göttingen was about 250. The faculty have a complete set of comparatively new buildings for the final branches. The primary subjects are taught in an older part of the University. The hospital buildings are situated in large grounds, there being three large separate buildings for Medicine, Surgery, Midwifery and Gynecology. Each of these buildings contains about 100 beds; they have complete equipment, and numerous rooms for microscopical and bacteriological work, etc. There are also isolated buildings for infectious diseases and septic cases. This would seem a large number of beds for a small place, but the country round is so thickly populated, and patients come in from such distances, that the beds were always full. The hospital itself is spoken of as the "Klinik." They contain no rooms corresponding to our private wards. These are found in what is termed the "Privatklinik." A fourth building in the hospital grounds was the Pathological Institute. All these buildings were quite separate from the others, and each was under the charge of the professor of the department, who is called the "Director."

Some reference to the general course of study may be of interest. There are two terms in each year which are called "Semesters." The winter semester is from the middle of October to the middle of February, the summer one from the middle of April to the middle of August. This gives eight months' work a year, but, as the work begins late and stops rather before the end of the term, probably seven months is about the average time. The student has to spend at least eight semesters in some university. They all go to at least two different ones, and so get the advantage of different men

and methods. They can also, through this, hear the most celebrated men on various subjects. At the end of the fourth semester, they have an examination somewhat like our primary. To take their degree they must present a dissertation on some particular subject—Surgery, for example—and be examined orally on four others—for example, Anatomy, Pathology, Pharmacology and Jurisprudence. Considerable latitude is allowed the students in regard to the order in which their work is taken. Thus, in the class in Clinical Medicine, corresponding to our final year, were men who had not yet taken their course in *Materia Medica*, and who knew absolutely nothing of drugs. To one of these, who knew nothing of either quinine or arnica, Professor Ebstein gave the very sage advice: “You must at least know the drugs that your patients do.” The man who desires to reduce the number of lectures in Medicine would find an opportunity for missionary work there. Many of the students began lectures at 6 a.m., and continued till 8 p.m., with only an hour for lunch. The course of lectures in Medicine was given at 7 a.m. Some Toronto students used to think that 8.30 a.m. was unnecessarily early,

The work done in the Pathological Laboratory may be spoken of in some detail. Professor Orth is at the head, and has complete charge of his department. He has two assistants, who have university appointments and are known as the first and second assistants. Dr. Aschoff, the first assistant, has been about seven years in Göttingen, and has done excellent work. Then, in addition, there are a number of men who are termed “Volunteer Assistants.” These are usually recent graduates, who spend one or two years in this way before beginning practice. They spend all their time in the laboratory, and are, of course, under the orders and direction of the professor. There were seven of these working under Professor Orth during this summer. The secret of much of the laborious and complete work coming from German laboratories lies in this. It can be seen how much can be done by these men, who are under absolute control and are ready to undertake anything ordered by the chief.

As to the teaching in Pathology. Five days a week Professor Orth gave a lecture—on General Pathology in one semester, and on Special in the next. These were abundantly illustrated by experiments and specimens, both gross and microscopical. On two afternoons a week there was laboratory work for three hours. During the first hour, Professor Orth gave a course on diagnosis from the fresh gross material. Each member of a class of perhaps twenty-five was given a specimen which he examined for some minutes. Then the class was called together, the organs of each case going together, and the whole gone

over by Professor Orth. Every man was questioned about his specimen, the rest of the class, of course, looking on. Professor Orth placed great importance on inspection, and the man who used his fingers too much was always checked by the saying, "*Oculis non manibus.*" It will be seen that a large amount of material would be required for this, and more than could be furnished locally. They have an excellent system of obtaining material from larger cities, such as Berlin and Bremen. By this, many rare conditions were seen. After this course, the work in Pathological Histology was held for two hours. The subject for the day was first spoken on, and then the sections were mounted and examined.

There were two minor courses given. One was given by Dr. Aschoff. The students were taken in small groups, given instruction in the doing of sections, which they afterwards did themselves, and in the various diseased appearances. A course on diagnosis from fresh material was given by Dr. Bencke. Specimens were seen in the gross; then teased specimens, or free-hand sections, were made by the student; and, lastly, cut sections were examined unstained and, in some cases, stained also. In this way histological and gross appearances were associated. One is impressed by the importance laid on the gross appearance, and on the immediate examination of teased or scraped preparations. Professor Orth is a magnificent teacher. He makes his points very plain, and then is evidently a believer in "Repeat, repeat, repeat!"

In Medicine Professor Ebstein gave a lecture five days a week. This was at the hour of 7 a.m., and at 10.30 a clinical lecture was given, lasting till noon. On five days a week this was given in the amphitheatre, on Saturday morning the class being taken into the wards. Daily ward visits were not made. In these lectures the patients were wheeled in, and examined generally in bed. An average of two patients per day came before the class. A student was assigned to each case. He took the history and kept track of the case. By this, each man had three or four cases in the semester. Professor Ebstein usually took the history himself, and examined the patient, afterwards giving a clinical lecture. - These were exceedingly good and practical. He evidently spoke from a large experience. The matter of treatment was always gone into, and that not only from the standpoint of the hospital patient, but also regarding the same case in private practice. Their therapeutics were usually very simple, and in no case was a complicated prescription ordered. After this clinical lecture the students might attend the outdoor department. Here there was ample material, of which the students made good use. In the afternoon there were limited classes in physical diagnosis, clinical microscopy, etc.

The students had comparatively little chance to follow cases from day to day on account of the few ward visits made. They considered—and rightly, too—that the best results with the large class they had, were to be got from a smaller number of cases seen in the amphitheatre. But one could not help feeling the advantage of a class being divided up into smaller groups. The teaching in the other clinical departments was much on the same lines. Through it all one was struck by the constant attempt to be practical. This was rather opposed to our perhaps too common idea of the German physician being only a laboratory worker.

STUDENT DUELLING.

There is another subject which, while hardly medical, still is of much interest; that is, the student duelling. This old custom is still very flourishing, and shows no sign of becoming extinct. The regular duels are fought between members of the various societies, and occupy the morning of one day per week. There are so many precautions taken that the danger of serious consequences is very slight. The combatants are very carefully prepared, so that only the head and face are uncovered, the eyes being protected by heavy iron goggles. Thick padding is wound around the neck, and the axillar and heart are covered by large pads. The swords have a long, light blade, with a very heavy handle. The sword-play is all from the wrist, and it is claimed that no blow can be struck sufficient to fracture the skull. The men stand very close to each other, and they are not allowed to move in the slightest. They begin with the swords high in the air, and, at the word, one sees the swords come down and hears them strike; after that it is impossible to see the blades. one can only hear them striking. As soon as one of the men is struck the seconds knock up the swords, and the damage is investigated. During each of these stops the blades of the swords are carefully wiped with antiseptic solutions and the cuts are mopped with the same. The actual fighting only occupies a few seconds, and this stop is usually much longer. In one duel, in which these were counted, the stops were thirty-one in number. Each fighting-time did not average more than five seconds, so that the actual fighting was under three minutes. This duel, with stops, went on for twenty-five minutes. But it must be remembered that the fighting does not go on for all of this time. There is always a surgeon present, who frequently examines the men and stops the duel if there seems to be danger. The wounds are of every position and degree. The most common serious cut is one dividing the temporal artery. The parotid duct is

sometimes divided, with the establishment of a fistula. Keloid occasionally develops in the scars. The wounds are dressed in an adjoining room, and, as soon as they are dressed, the men are back in the hall eating and drinking. They take pride in being seen with all their dressings on, and, as iodoform was an invariable dressing, one was never far away from its smell on the more public streets.

The custom to us seems a barbarous one. To see the duels is in many ways not pleasant, but it is fascinating and one cannot help watching carefully. The men show absolutely no emotion of any kind, even if being cut to pieces, nor do they make a movement of any kind. It is certainly an exhibition of one type of courage, and that we must always admire.

Selected Article.

EPILEPSY OR FALLING SICKNESS.

BY C. W. SUCKLING, M.D., LOND., M.R.C.P.

Consulting Physician to The Queen's Hospital, Birmingham, etc.

From Dr. Suckling's valuable paper we publish his views on the treatment of this disease :

I believe that if every case was properly treated from the commencement, in the great majority of cases a cure would result. After the first fit the patient should be under medical superintendence for at least two years, and should take the bromides for that time, and should have the general treatment necessary. The difficulty is that the people have not the patience to continue the treatment.

Medicinal Treatment.—The bromides still hold the field as the most useful drugs. The prescription I usually give to an adult is the following :

℞ Potassii bromidi..... x gr.
Ammonii bromidi..... x gr.
Tinct. bellad. x ℥.
Aq. menth. pip..... ʒ j.

Two tablespoonfuls to be taken on getting into bed, and one tablespoonful to be taken before rising in the morning.

This mixture may be increased or diminished as necessary. It is best to give the medicine in this way, for the patient does not feel the worry of taking it, as he would if he had to take it in the daytime. The medicine should be continued for at least two years after the fits have ceased. The dose has to be increased or diminished till the minimum quantity necessary to control the attacks is found. I have many times found that the omission of a single dose has caused an attack. The larger dose is best given at night so that its effects wear off towards the morning, and the patient is not sleepy all day. I have known patients take this medicine for years without the slightest ill effect. If there is heart disease the belladonna should be replaced by digitalis. If the bromide mixture fails, borax may be tried, or ergot. In very obstinate cases iodide of potassium should be tried. Bromide of strontium has not in my experience been so useful as the bromides of potassium and ammonium. Arsenic is of no use in epilepsy. I have found that the addition of this drug for acne will bring on the attacks, and iron also does the same. I have met with two or three cases of epilepsy with a slow pulse (forty to fifty) and have found the attacks cease with the bromides combined with trinitrin.

Where the bromides have failed I have also found the zinc salts useless. In some cases the addition of a small dose of tincture of opium instead of the belladonna has done good. I have asked a friend of mine, Dr. Rutherford of the City Asylum, Exeter, how he treats cases of status epilepticus, and he writes that he has only lost one case during the last few years; before that most of them died. He clears the bowels with a large enema, and then injects one-hundredth of a grain of hydrobromide of hyoscine. If the convulsions are not better one-fiftieth of a grain an hour later is injected. After that he is guided by the condition of the patient, but more than two injections are rarely needed. The hyoscine used is procured direct from Merck, of Darmstadt. Dr. Rutherford thinks that most of the failures are due to using the so-called tabloids, which he considers are quite untrustworthy.

The general treatment in epilepsy is of the greatest importance, and unless this is properly carried out medicinal treatment is useless.

In the attack the patient should not be interfered with, except that biting of the tongue should be prevented by a piece of india-rubber wrapped in a handkerchief, the head should be placed on one side, and care should be taken that the patient does not injure himself against articles of furniture, or turn over on his face. Epileptics should not be allowed to climb ladders, or to bathe, or even to get into a bath. On more than one occasion I have known death to occur in a bath. Especial care should be taken in cases of procursive epilepsy that the patient is kept on the ground floor. After an attack it is best to leave the patient alone and let him sleep. Care must be taken to empty the mouth with a spoon when an attack comes on at meal times.

A quiet life free from mental excitement is necessary, and cold sponging or the application of cold water to the head does good.

In all cases where there is a local aura it is important to abort the attack if possible by a ligature, or a handkerchief, or a piece of tape applied round the limb; and the attack may sometimes be aborted by forcibly opposing the contraction of the muscles that are first convulsed. I have occasionally met with patients who by a great effort of will-power have been able to stop the onset of a fit. Daily outdoor exercise, short of fatigue, and a moderate amount of mental work are necessary. It is a mistake to keep epileptic children altogether away from school. I find that they are much better for a few hours' instruction daily. At the same time their lessons must not be made a worry to them, and should be of moderate duration. Tea or coffee should be taken sparingly. Epileptic patients should be advised

not to marry, except in rare instances where the fits have only occurred at intervals of years. A young lady under my treatment had had no fits for two years, and then they began again. I discovered the cause to be that she had just become engaged to be married. An epileptic should not be allowed to carry a gun. Dancing, swinging, and romping are bad. I have mentioned the case of a little boy who always has fits after eating walnuts. I saw recently a middle-aged man who occasionally had severe attacks of cramp in the legs and very painful extension of the great toe; he had to jump out of bed and rub the parts to get relief. I found that these attacks always followed his eating walnuts. Children who have had eclampsia in infancy, or who come of a neurotic family, should be brought up most carefully; they should be properly kept in order, and should be brought up for an occupation which is suitable to them, which shall be free as far as possible from worry or excitement. I cannot give an accurate estimate of the number of cases not cured, cured, relieved or not relieved, for in a large majority of cases the patient desired only an opinion and a prescription, and I did not see him again. But I am surprised at the number of cases that I have found to be cured at the end of some years. One gentleman whom I saw ten years ago recently brought his wife to see me; he had taken medicine for three years, but for seven years he had had no attacks. His attacks always occurred on getting out of bed in the morning. After the fits had ceased he had occasionally what he called shocks in the morning.—*Birmingham Medical Review*.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

The Nosology of the So-Called Functional Diseases.

Drs. Joseph Collins and Joseph Fraenkel, of New York, in *Med. Record*, June 17th, claim that these diseases are due to disturbances in the sympathetic nervous system, either as centrally represented in the brain and cord, in its ganglia, or in its peripheral nerves. The diseases that they include under the term functional for the purposes of their paper, are insanity without gross lesion, epilepsy in all its varieties, hysteria and allied conditions, the neurasthenic state, migraine, angio-neurotic edema, asthma, non-pancreatic diabetes mellitus and insipidus, Graves' disease, rheumatism, rheumatoid arthritis, arthritis deformans, arterio-capillary fibrosis, pathological obesity. They contend that these diseases are better explained on the basis of disease or derangement of the sympathetic nervous system than any other assumption. They all have a common feature of heredity, degenerating and influenced by surroundings. A striking feature of the functional diseases is their mode of onset. This is almost invariably insidious. The patient can give but little information as to the initial phenomena. In the case of organic, the reverse is the case. In these, the patient can tell in most cases the very day the trouble began, and point out the initial phenomena. In the case of functional disorders the patient's language is inadequate to describe all his ills; whereas, in the organic diseases, the patient states his case in a few words and usually makes light of his trouble. Then again, in the matter of treatment there is a feature in common to all the functional diseases. The patient's strength must be improved in all cases. The vegetative system must be attacked. This does not mean that the acidity of the blood in rheumatism should not be lessened, or that the nasal membrane should receive no attention in asthma; but behind all this there lies a weakness that requires long-continued toning.

The Treatment of Abdominal Palpitation.

Sir Willoughby Wade, *Brit. Med. Journal* for June 17th, relates his experience with the above affection. He expresses the opinion that it is caused by an excessive accumulation of

blood in the abdominal aorta. Along with this, there is high tension in this vessel. Pressure over the aorta elicits tenderness, sometimes extreme tenderness. The trouble is most frequent among women, though occasionally met with among men. There is usually some disease in some splanchnic viscus, though this may not be severe and may be intermittent. The splanchnic and somatic circulations are complementary of each other. The treatment that has been found of most value is the administration of nitroglycerine. A bedtime dose of 1-200 or 1-100 usually is sufficient.

Arterial Sclerosis and Cerebral Hemorrhage and Thrombosis.

Dr. Edward D. Fisher, Professor of Diseases of the Nervous System, New York University, in the *Medical Review of Reviews*, discusses the relation of arterial sclerosis to cerebral hemorrhage and thrombosis. He makes the statement that arterial sclerosis is a chronic, progressive disease, and that the great importance of the condition lies in the changes that take place in the areas of the organs affected by the impaired or altered circulation.

When the cerebral arteries become sclerosed, it is only a part of the general conditions existing in the other portions of the body. When the external arteries, as the radial, temporal, retinal, etc., show sclerosis, it may be safely assumed that those at the base of the brain are in a similar condition, as well as the smaller ones throughout the brain substances. Even though larger vessels of the brain show no change, the smaller ones rarely escape when there is evidence of sclerosis in other arteries.

In order that the circulation of any part may go on properly three conditions must exist: the normal elasticity, contractility and diameter of the vessels. The normal elasticity of the vessels, especially the larger ones, causes the blood to flow in an unbroken, continuous current through the small vessels, relieving them of the direct pressure from the heart's action. When the larger vessels at the base of the brain are calcareous, the blood flows with force and high pressure into the small arteries.

Loss in the contractility of the smaller arteries is of much importance. Through the vaso-motor mechanism, this contractility regulates the amount of blood supplied to the brain. By changes in the contractility of the arteries there may result a condition of hyperemia, or anemia, and the consequent changes in nutrition. Unless there be disease in the vessels it is impossible for the heart to produce a rupture of their walls, and thus give rise to a hemorrhage. In the early stages of the sclerosis, there may be many functional disturbances of the brain, such as vertigo, slight loss of power over a limb, or temporary aphasia, etc.

One of the earliest symptoms of the commencing sclerosis is tension of the radial pulse. This tension at first disappears after exercise that sets the heart acting more freely, and returns after rest and eating. The principal causes of this hardening of the arteries are: syphilis in the later stages; alcohol, which has a selective influence on the smaller arteries; gout, especially in the more latent forms; lead poisoning; overwork, more particularly mental overwork and worry; advancing age, as many elderly persons suffer from sclerosis of the arteries; and heredity, as in many instances sclerosis runs through several generations. It is a disputed point how far chronic interstitial nephritis is a cause. It is more likely that the disease in the kidneys and the arterio-sclerosis are parts of a common degeneration.

The premonitory symptoms are the same, whether the case ends as a hemorrhage or a thrombosis. There may be an active or a passive hyperemia or an anemia. This may continue for months, or even years, before the vessel ruptures or becomes plugged. At this stage of the disease, the clinical picture becomes distinctive of the conditions of hemorrhage or thrombosis. In hemorrhage, where the blood effused into the brain substance is sufficient to cause cerebral compression, and this is usually the case, there is a sudden loss of consciousness, the breathing is labored and stertorous, the pulse full and bounding, the temperature at first lowered. In thrombosis the loss of consciousness is not so profound, the breathing at first is not labored, the patient can often describe the onset, often there is a gradual paralysis of the arm, leg, or loss of speech, which may pass into complete unconsciousness, with labored breathing. The pulse never shows the full, bounding, incompressible character of hemorrhage. The temperature at first is not affected.

The treatment of arterio-sclerosis is of the utmost importance. Many of these cases have consumed a good deal of alcohol and have lived sedentary lives. It is necessary to lay down strict rules on these subjects. It is not well to enforce total abstinence. Moderation is the safest course. Nor is it wise to change the sedentary habits into too active a life. Violent exercise, either in walking, rowing, cycling, or horseback, must be forbidden. A mixed meat and vegetable diet is the best.

In the early stage of arterio-sclerosis, hydrotherapy is very useful. Cold applications contract the arterioles at first, to be followed by dilatation. A warm bath, by dilating the vessels, may induce good sleep in these cases. When the sclerosis is far advanced, cold bathing is often dangerous. The tepid bath should then be taken.

When the tension is high 1-200 nitroglycerine is very useful. Potassium iodide in doses of gr. v. three times a day for a long time is of the utmost importance. Free movement of the bowels

by laxatives relieves the whole vascular system. These patients should drink a quart of water daily.

The Treatment of Sleeplessness.

Dr. John B. Bradbury, in his Croonian lectures (*Brit. Med. Jour.*, July 15th), remarks that the treatment of insomnia often resolves itself in a study of the causes. First, there are the irritative causes, as pain and uneasiness, such as children teething, or the presence of worms. Eye-strain or eczema keeps many an adult awake. Then we have the toxic causes, as alcohol, tobacco, the poisons of febrile diseases, conditions present in gout and rheumatism, and the toxins left in the system through bad circulation, kidney diseases, etc. Further, there are the mutual causes of grief, worry, shock and anxiety. There is usually in these cases a nervous temperament. There are also cases of insomnia due to change of habits and mode of life, such as late dinners, high altitudes, changing from day to night duty, or *vice versa*. No treatment of insomnia can be successful that is not deduced from a study of causes. But even though the causes have been sought out and removed, sleep may not return. The cells of the brain have become irritable. In mild cases, try bromides first. Paraldehyde is one of the best hypnotics. Chloramide is good and safer than chloral. Sulphonal is the best of the sulphones.

Tetanus Treated with Antitoxine.

Dr. A. de Yoanna, Brooklyn, reports in *Medical Record*, July 29th, a case of tetanus with severe spasms on the muscles of the jaws, neck, pharynx and larynx. The pulse was 120, temperature 102, and respirations 36. There was sore on one finger, discharging a greenish pus. The half of a nail was removed, and the wound properly dressed. During the afternoon three injections of antitoxine of 20 c.c. each were given—one in the arm, one in the shoulder, and the third in the back. Next day the pulse was 90, and the temperature and respirations normal. The antitoxine was continued for three days at the rate of 40 c.c. daily. The patient improved rapidly, and in three days could go from one part of the room to another, and partake of liquid nourishment freely. The injections were kept up for fifteen days altogether, and a total of 280 c.c. administered. The case did exceedingly well. The tetanus came on February 17th, and he returned to his work on April 15th.

Pneumonia in the Aged.

Dr. Robert H. Babcock, in *Jour. Amer. Med. Assn.*, August 19th, claims that the aged suffering from pneumonia require

and bear large doses of strychnine. Alcohol should be given in small and frequent doses, and ammonia is helpful, and should be administered often. Other than the above, as little medicine as possible, for fear of upsetting the stomach. The food should be liquid, and nothing suits better than milk and beef juice. The kidneys are apt to fail, and these nutriment favor these organs.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

First-aid Package in Military Surgery.

N. Senn emphasizes the following: (1) First-aid packages are indispensable on the battlefield in modern warfare. (2) The first-aid dressing must be sufficiently compact and light to be carried in the skirt of the uniform, or on the inner surface of the cartridge or sword belt, to be of no inconvenience to the soldier or in conflict with military regulations. (3) The Esmarch triangular bandage is of great value in the school of instruction, but in the first-aid package is inferior to the gauze bandage. (4) The package must contain in a waxed antiseptic envelope an antiseptic powder, such as boro-salicylic powder, two sterilized safety-pins wrapped in tin-foil, and between this package and the outside impermeable cover two strips of adhesive plaster one inch wide and eight inches long. (5) The first-aid dressing must be applied as soon as possible after the receipt of the injury, a part of the field-service which can be safely intrusted to competent hospital-corps men. (6) The first-aid dressing, if employed behind the firing line, should be applied without removal of the clothing over the injured part, and fastened to the surface of the skin with strips of rubber adhesive plaster, the bandage being applied over and not under the clothing. (7) The first-aid dressing must be dry, and should remain so by dispensing with an impermeable cover over it, so as not to interfere with free evaporation of wound section. (8) The first-aid dressing should not be disturbed unnecessarily, but any defects should be corrected at the first dressing-station.—*Phila. Med. Jour.*

A New Method of Reduction in Separation of the Lower Epiphysis of the Femur.

Hutchinson and Barnard recommend the following method of reduction in cases of separation of the lower epiphysis of the femur: Under complete anesthesia an assistant makes steady but strong traction upon the tibia in the line of the

limb. This overcomes the upward pull of the quadriceps extensor and brings the epiphysis down to the line of separation. The operator then clasps his hands beneath the lower thigh, and draws it steadily upward, gradually flexing the knee and hip-joint, while the assistant still keeps up the traction on the leg. This causes the epiphysis to move back upon the fractured surface of the diaphysis until it has reached its normal position, and further movement is prevented by the periosteum coming into tight contact with the anterior surface of the femur. A bandage is then applied around the thigh and ankle, fixing the knee at an angle of about 60° . The limb is laid on its outer side on a pillow, and an ice-bag can conveniently rest upon the front of the knee. After fourteen days the limb can be extended, under gas if necessary, and put up in plaster in a position about 30° short of the straight line. The patient can then go about on crutches. The plaster remains on for from a fortnight to three weeks, and a little massage restores the movements of the joint. Four illustrative cases treated by the method described are reported, and the following conclusions are expressed: (1) Separation of the lower epiphysis of the femur is a serious injury, and when compound, is attended with a high mortality. (2) In the extended position of the knee, even with an anesthetic, reduction of the fragment is very difficult, if not impossible. (3) When the epiphysis is not reduced, the patient is laid up for about three months, and is lame for about six months, while the end of the diaphysis frequently requires removal by operation. Shortening of the limb, and secondary curves in the spine, always follow. (4) Nevertheless, the ultimate result in most cases in which recovery at all takes place is good. The articular surface of femur gradually grows in a useful position. (5) With the method of full flexion, reduction is always easy, the treatment is short, and it is the rule to obtain perfect movement in the knee without shortening or deformity of the leg.—*Lancet*.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. McILWRAITH.

Chronic Valvular Disease in Pregnancy.

Jess (*Münch. med. Woch.*, October 4th and 11th, 1898) bases his remarks on twenty-nine cases observed in the Kiel medical polyclinic. A slight hypertrophy of the heart muscle during pregnancy is now very generally admitted. A diseased heart in which the compensatory hypertrophy has been carried to its furthest point is not in a position to overcome the increased resistance to the circulation present in pregnancy, and hence dilatation occurs. The dangers encountered during parturition are due to (1) the pains, (2) the mental excitement, and (3) the emptying of the uterus with the consequent fall in blood pressure may eventually lead to edema of the lungs and death. Of the twenty-nine cases, twenty-three were examples of mitral disease (mostly stenosis), three of aortic disease, and three of combined mitral and aortic disease. From a study of these cases it is obvious that many women with heart disease can get over the dangers of child-bearing. There was only one fatal case in the twenty-nine, and the total number of births was 114. Jess then analyses the recorded cases. Here the death-rate is much higher, because only the severest cases would be admitted into hospital. Leyden says that 40 per cent. of severe cases of heart disease in women die as a result of child-bearing. In three of the author's cases similar symptoms developed to those seen in the fatal case, but they passed off. In one case symptoms of disturbed compensation occurred in each of ten pregnancies, but they were really only threatening after the last pregnancy. In three cases symptoms only appeared in the fourth pregnancy, and in another two cases in the sixth pregnancy or later. In three cases the patients even said they were better during pregnancy. Child-bearing is borne almost as well by those with perfectly compensated heart disease as by the healthy, and this was so in sixteen of the author's cases. His figures also show that abortion is relatively common in those with heart disease. Thus, the author concludes that in slight and well-compensated heart disease childbirth is usually well borne. After repeated pregnancies symptoms may arise. In severe uncompensated valvular lesions, and especially mitral stenosis, child-bearing is harmful. The author has not seen any special ill effects in slight aortic disease. He does not agree that marriage must

be unconditionally forbidden in heart disease. Where symptoms of valvular disease have existed for some years, marriage must be forbidden, and especially also in women who have to work. The author finally makes some remarks on treatment, and draws attention to the care which must be exercised during parturition in these cases.—*Epitome Brit. Med. Jour.*

[We believe that the percentage of deaths from this cause that is given in text-books on obstetrics is too high. Osler in his "Practice of Medicine" says, under the section on "Prognosis in Valvular Disease": "Pregnancy and parturition are disturbing factors, but are, I think, less serious than some writers would have us believe." He also cites a case of a woman with mitral insufficiency who bore eleven children without injury to the heart.]

Case of Vesicular Mole.

Dr. Carl E. Black, of Jacksonville, Ill. (*Medical Fortnightly* for July), reports an interesting case of vesicular mole. After concluding an account of a previous operation on the patient for the fixation of a floating kidney, the doctor continues:

"Supposing that after all an abortion was pending, I visited the patient at once. To my great astonishment I found my patient almost exsanguinated. The tissues all about the vaginal walls, vulva and rectum, were infiltrated and distended with blood, and the vaginal inlet almost obliterated by this infiltration. I was utterly unable to find the cervix. On examination all that I could discern was a ragged torn opening in the left vaginal wall, from which profuse hemorrhage was taking place. Patient had no pains, nor had she any during the night. I tamponed this ragged opening with strips of gauze to stop the hemorrhage, and used general measures to support the patient. My supposition at the time was that we had an extra-uterine pregnancy which had ruptured downward instead of upward. After the tamponing the patient rapidly grew worse, until the pulse was imperceptible at the wrist, and the heart-beat could be counted with a phonendoscope at 170. Seeing that the patient would not survive long without more was done, and believing that there was intra-abdominal hemorrhage, as well as vaginal, the patient was taken to the operating-room, and abdomen hurriedly cleansed and opened by a median incision. The uterus was found normally pregnant, and the tubes and ovaries were normal. One point of difference from normal pregnancy was that the uterus seemed softer than usual.

"After closing the abdomen and putting on dressings, the packing was taken out of the vaginal rent. This opening was enlarged and the left uterine artery was ligated, thus putting

an end finally to our hemorrhage. After the infiltrated blood in tissues had somewhat subsided the true nature of our case became plain. Some small vesicles came out through the ragged opening, which showed the true character of the trouble. However, the cervix was normal and firmly closed. There were no uterine pains, there was no discharge, nor had there been at any time, either serous or bloody, and there was no way in which I could ascertain that normal pregnancy was not co-existent with degeneration of the chorion.

"What had happened was the invasion of the uterine wall by the vesicular degeneration, and its perforation into the tissues and then into the vagina.

"After checking the hemorrhage, and making free use of normal salt solution in the tissues, the patient rallied and rapidly recovered.

"The rent in the vaginal wall healed quickly and completely, although after each dressing, for a number of days, several vesicles would be brought out. At the end of five weeks the patient was able to walk about the hospital, and returned to her home, which was near by, where she remained five days, when she began to have uterine pains, accompanied by some discharge of blood. She returned at once to the hospital, but delivery did not take place for nearly two weeks. After she was put to bed and kept quiet, the pain subsided, and it seemed as though she might be going on to full term. However, on February 25th, 1898, five and one-half months after conception, uterine pains became strong, and she was delivered spontaneously of very large vesicular mole, accompanied by no semblance of fetal tissue.

"Examination of the interior of the uterus showed the whole wall to have been more or less invaded by the degeneration. While the mass discharged seemed complete in itself it did not bring away all the vesicular tissue. A few vesicles came away each day in changing the uterine packing, and it was necessary to thoroughly curette and apply iodine several times before anything approaching a normal condition of the uterine lining was obtained. There was some slight infection, and it required three months of almost daily cleansing and packings with gauze to bring the uterus back to anything like a normal condition; and, for a time, I was of the opinion that it could never be accomplished, and that the safest procedure would be to remove the uterus. However, the daily treatments were persisted in until finally, after four months, the uterus became comparatively normal."

One year following the date of delivery of the mole the patient again became pregnant. The result of this pregnancy is not yet reported. Dr. Black concludes his paper by a very

instructive *résumé* of the symptoms in one hundred cases collected from literature.

Secondary Operations for Rupture of the Perineum.

Kholmogoroff advises the performance of secondary operations for ruptured perineum during the puerperal period, that is, from the second to the twentieth day after labor. He performed the operation in twenty-five cases during that time, and in all cases obtained primary union. There is no danger of lochial infection of the raw surfaces, if suitable precautions are taken. The operation is undertaken in those cases where immediate suturing after labor has not been done, or where, if done, has not been successful. The patient's vagina is carefully washed out with corrosive sublimate solution and a tampon of sublimate gauze inserted to take up the discharge. The tampon is removed just before the operation, the vagina again syringed out, and a fresh tampon inserted, which remains *in situ* for twenty-four hours. This prevents the lochia coming in contact with the wound until some adhesion of the raw surfaces has already taken place. After this the tampon is unnecessary, and careful vaginal douching is sufficient. The operation consists in first marking out the extent of the raw surface, and then removing the granulation or cicatricial tissue with a sharp spoon within that limit. The sutures are then inserted in the usual way, and the raw surfaces brought together. The sutures are removed on the seventh day. The temperature generally remains normal after the operation, but there may be a slight rise. In this way many a perineum can be repaired during the time the patient is under observation after labor, and this does away with the necessity of her applying for advice in six weeks afterwards, which many of them fail to do through either fear or neglect.—*British Med. Jour.*

[At the Burnside a case in which the immediate operation was not successful, was operated on ten days after labor in the following manner: The two healthy granulating surfaces were simply drawn together with sutures, without any "freshening up," and good union obtained.]

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF J. CAVEN, H. B. ANDERSON AND J. AMYOT.

Cancer.

Bra states that he has isolated from carcinoma in the human being, fungi which, when injected into animals, gave rise to tumors; these, he said, showed the typical structure of fibrosarcoma and carcinoma when examined microscopically.—*Presse Medicale*, February 22nd, 1899.

Woillez's Disease (Idiopathic Pulmonary Congestion).

Carrière (*Rev. de Méd.*, January 10th, 1899) sums up his study of this disease, as follows:

"Woillez's disease appears to be produced by microbial agencies belonging to various species. The chief cause, however, is without doubt the Talamon-Fraenkel pneumococcus, other microbes capable of inducing the disease being the staphylococcus and streptococcus. In every case the virulence of these microbes is strongly attenuated. In cultures from this disease the pneumococcus loses its virulence on the fourth day.

"When the pneumococcus is the cause the début of the disease is always sudden and violent. Fever is high and the intensity of other symptoms especially marked.

"The natural virulence of the pneumococcus produces pneumonia; when this natural virulence is attenuated we get Woillez's disease.

"The frequency of idiopathic pulmonary congestion is about the same as that of pneumonia and pleurisy, and similar variations are noted from year to year.

"Men are more frequently affected than are women, and especially men who are naturally subject to exposure or to rapid changes of temperature. The maximum decade for frequency is between the ages of twenty and thirty."—*Med. Rev. of Revs.*, June 25th, 1899.

Co-existence of Carcinoma and Tuberculosis of the Mammary Glands.

A. S. Warthim, Instructor in Pathology, University of Michigan, records in the *Amer. Jour. of Medical Sciences*, July, two interesting cases of co-existence of carcinoma and tubercle in the mammary gland. The old doctrine—Roketansky's—that tubercle and carcinoma never were found together, has been abundantly disproven, even though recorded cases are not very numerous as yet. It has been shown that the diseases may not only co-exist in the same individual but in

the same organ. Omitting other considerations in this connection, the question of the relationship of the conditions is one that immediately obtrudes itself. Which disease is primary? Does tubercle cause cancer, or does cancer give an opportunity to tubercle?

Warthim quotes the conclusions of Lubarsch, who has made some study of the question, as follows:

1. The combination is purely accidental. Half the cases are in this category.

2. Carcinoma may be metastatic in or near tubercular lesions, old or recent. Not rare.

3. A fresh infection of tubercle bacilli may occur in well-developed carcinoma. Rare.

4. Carcinoma may arise in a progressive chronic tuberculosis the tubercular process acting as a predisposing trauma.

5. Both conditions may possibly arise at once. No proof.

Ribbert holds that, in some cases, tubercle may be the exciting cause of carcinoma. (Cf. No. 4 of Lubarsch.)

Warthim, after study of his two cases, thinks that the first gives support to Ribbert's view as quoted above, and that his Case No. 2 falls into Lubarsch's category No. 3.

The Diagnosis of Tubercle Bacilli in Pleuritic Fluid.

Besançon and Griffon (*Lancet*, April 1st, 1899) have just made known a discovery which promises to be of the greatest use in the diagnosis of the tubercle bacillus in cases where direct microscopical examination is of no avail, as, for instance, in the effusions of pleurisy. Until now the accepted method has been to inject some of the suspected fluids into the peritoneal cavity of a guinea-pig, but this procedure often failed to give any definite result even when the fluid came from a patient undoubtedly the subject of tubercle. Possibly the serum itself possessed immunizing qualities, or else the microbes were in so very dilute a solution that there were too few in the small quantity of fluid injected to affect the animal. The cultivation method would have given good results if the operator could have been certain of always using a cultivation medium of a constant nature. Such a medium, however, was not known until Besançon and Griffon took to using agar-agar (*géluse*) mixed with blood. Pus from a chronic abscess connected with the ribs, cultivated after this method, gave at the end of ten days bacilli visible under the microscope. Pleuritic fluid from two patients, cultivated in the same way, gave colonies visible to the naked eye at the end of twenty-eight days. Bacilli from these under the microscope are absolutely characteristic. As a control experiment two guinea-pigs were inoculated at the same time with the same fluid, and one of these animals, which was

killed at the end of twenty-eight days, showed no visible lesion due to experimental tuberculosis. In this case, then, the presence of the tubercle bacilli could not have been demonstrated without the culture method, and it is evident that this mode of research will be very useful. By it observers will be able to diagnose the presence or absence of the tubercle bacilli in various effusions, such as those into the joints, the tunica vaginalis, the peritoneum, or the meninges.—*Univ. Med. Mag.*, July, 1899.

The Micro-organism of Scarlet Fever.

William J. Class (*Chicago Medical Recorder*, May, 1899, p. 373), referring to the unsatisfactory results of the investigations of Kleim, of Crajkowski, and of other careful observers in isolating a specific micro-organism of scarlatina, concluded that the fault lay with the culture media employed. After various failures he has succeeded in finding a medium on which he has been able almost invariably to obtain, both from the scales and from the throats of scarlatinal patients, the growth of an organism which presents such characteristic features, both in its morphology as well as in its growth, that he believes it to be the specific germ of scarlet fever.

It is a diplococcus resembling, as ordinarily seen on slides made from fresh cultures, a very large gonococcus. This biscuit-shaped appearance is best seen in specimens that have been but slightly stained. In these is also noted a transverse line running through each half of the organism, giving it the appearance of a tetrad. The size varies. It is always considerably larger than the ordinary pus microbe. Lancet-shaped forms, as occur in the pneumococcus, are never met; but streptococcus forms are occasionally, though rarely, observed, as are also single cocci. They have no capsule and show no spores. Specimens from pure cultures are satisfactorily stained by watery solutions of methylene-blue, by carbol-fuchsin, Bismarck brown, and Pitfield's flagellæ stain. They are decolorized by Gram's method, though not to the same extent as the gonococcus, the larger variety holding the stain somewhat better than the smaller.

The culture medium consists of glycerin-agar, to which is added about 5 per cent. by weight of black garden earth, previously sterilized by discontinuous heating. On this medium the scales of a scarlet fever patient are placed with a sterile platinum loop, and the tubes put in an incubator, the temperature of which is kept at about 35° C. Within forty-eight hours to one week, small, whitish-gray semi-transparent colonies appear along the track of inoculation and around the scale. On agar-agar, glycerin-agar, and gelatin there is no growth, and bouillon is not clouded. Milk does not appear to be affected, but the

organism apparently multiplies in it. On potatoes there is no growth.

Rabbits and guinea-pigs were not affected by subcutaneous injection of pure cultures, by scarification and inoculation of the wounds produced, and by intra-abdominal injection.

The germ described has been cultivated from the scales of about thirty cases of typical scarlatina, and has also been found in the throats of these patients and in cases of angina occurring in persons exposed to scarlet fever in whom no eruption appeared, and lastly in the throats of children in a family where one member had typical scarlatina, the children being in normal condition when the culture was made, but subsequently developing a typical rash, in the scales of which the same organism was found.—*Amer. Journal of Med. Sciences*, July, 1899.

Hypotoxicity of the Urine of Normal Pregnancy.

Labadie-Lagrave, Boix and Noé have carefully studied the urinary toxicity of the pregnant woman from the date of suppression of the menses up to several months after delivery; and in opposition to both the *a priori* view of the facts obtained by other investigators, they find that in the healthy woman pregnancy does not involve the production of autotoxic substances. Pregnancy means normally hypotoxicity, and when we do not obtain this lowering of toxicity, *i.e.*, when the coefficient is unchanged or increased, we have to beware of eclampsia and other results of self-poisoning. The results obtained by these investigators are so diametrically opposed to the teaching of other authorities that the entire subject of urinary toxicity of pregnancy should be disregarded by the practitioner until some agreement is reached as to behavior of urine in the normal pregnant woman. Some observers have stated that from the moment of suppression of the menses the urinary toxicity is increased; while our present authors maintain the contrary to such an extent that lessened toxicity of the urine unexplained by tuberculosis, hysteria or chlorosis, is held by them to be due to pregnancy. The present authors publish toxicity curves as documents of the scientific accuracy of their work, and it would seem that researches undertaken upon a sufficiently large material ought to readily solve this problem.—*Med. Rev. of Revs.*, July, 1899.

Bacillus Icteroides and Bacillus Cholerae Suis.

Reed and Carroll (*The Med. News*, April 29th, 1899, p. 513) in the course of a comparative study of bacillus X (Sternberg) and bacillus icteroides (Saranelli) also observed the effect of the intravenous injection in dogs of the bacillus coli communis and

the bacillus cholerae suis. They found that the same clinical symptoms—viz., vomiting, increased action of the bowels, and profound prostration—which are produced in dogs by the intravenous injection of *B. icteroides* are also brought about by a like inoculation of the hog-cholera bacillus. The anatomical changes were similar with both organisms, but in neither instance was the degree of fatty degeneration at all comparable with that present in the human liver in yellow fever. The results of inoculations of guinea-pigs, rabbits and pigeons with these organisms and the feeding of them to hogs were similar in both cases. An important point in their work was the observation that the serum of an animal immunized with *B. icteroides* had a marked agglutinative action on the hog-cholera bacillus. The cultural characteristics of the two organisms were almost identical. As a result of the striking similarity in the cultural characteristics of the two bacilli and of their pathogenic action on various animals, Reed and Carroll believe that the *B. icteroides* (Saranelli) is a variety of the hog-cholera bacillus, and should be considered only as a secondary invader in yellow fever. They find that the bacillus X (Sternberg) shows marked difference from the above-mentioned organisms, both as to its biological character and its pathological action toward animals. They are of the opinion that the bacillus X should be placed with the colon group.—*Amer. Jour. of Med. Sciences*, August, 1899.

Supra-arterial, Epicardial, Fibroid Nodules.

J. H. Mason Knox, jun. (from Johns Hopkins University Pathological Laboratory), in a paper published in the March (1899) number of the *Journal of Experimental Medicine*, describes a pathological condition of the arteries of the heart, which must be rare—so far, at least, as records go—since no previous description could be found by the author. Five cases have been seen in the Johns Hopkins Hospital *post-mortem* room during the last few months. The condition must be distinguished from the ordinary “milk spots,” so commonly seen on the epicardium, and more especially from the nodose condition of arteries described by Kussmaul and Maier under the name of “periarteritis nodosa.” The gross appearance of the vessels affected is characteristic; the nodules vary from tortuous, more or less uniform elevations upon the arteries, to whitish dots so few and small as to almost escape notice; the number of nodules may be such as to give the appearance of strings of beads, or they may be widely separated; the epicardium appears otherwise healthy; nodules do not encircle arteries, nor do they seem to have any relationship to the bifurcations of arteries, nor, in fact, to any one part of a vessel

rather than another. They occur on the vessels of the ventricles chiefly, but also on those of the auricles, and even those in the adventitia of the aorta. There is no tendency to aneurysmal dilatation observable. The microscopic appearances vary somewhat in different specimens in some details, although, on the whole, the morbid process is the same. The sections were made from coronary arteries. In most sections the intima shows little change, but in a few there is proliferation of intimal cells; in one case intimal changes are marked, though chiefly in the myocardial segment of the artery, *i.e.*, opposite to the fibroid nodules. The muscularis is in most cases unchanged; in a few sections it shows degenerative processes and even cell infiltration. Changes in the adventitia are slight and inconstant.

The fibroid nodules lie upon the vessels within the epicardium, being seated primarily in the connective tissue between the endothelium and the delicate layer of elastic fibres which rest upon the main layer of loose, vascular, connective tissue containing the epicardial fat; in other words, in the same position as that occupied by the milky spots. The appearance on cross section is as though a compact mass of firm connective tissue, convex on its inner surface, were set upon the artery in the loose epicardial tissue. These nodules are, when formed, poor in cells. They are rarely observed upon veins, and bear no definite relation to endarteritis, though sometimes associated with it. The causation of the nodule formation is obscure.

Pyocyaneus Bacillemia.

In a short article in the *Amer. Jour. of Med. Sciences* for August, 1899, Brile and Libman review the previous records of this condition, and add a case of their own. Of a considerable number of cases reported but four are accepted by them as showing any proof that is at all convincing. Their own case makes the fifth. Of the five cases, in two only—Finkelstein's and their own—were cultures made from the blood during life. All cases recorded up to the present time are arranged under these heads: (1) Those in which the bacillus was found during life or *post mortem* in the gastro-intestinal canal, or in abscesses or exudates having a direct or indirect communication with the open air. (2) Those in which it was found during life in abscesses or exudates, not in direct communication with the open air. (3) Those in which there is claimed to have been an undoubted general invasion by the bacillus; in other words, in pyocyaneus bacillemia.

Editorials.

THE ABUSE OF MEDICAL CHARITY.

We have often directed attention to this subject, but it is not yet disposed of. The growth in the number of persons who obtain free medical and surgical treatment is enormous.

In the first place, it is very wrong that a patient who is much wealthier than the physician, or surgeon, in charge of his case, should be entitled to free attendance, simply because he elects to go to a public ward in a hospital. The fact that he enters a ward for which the weekly charge is \$2.80, should not entitle him to free attendance. This is an outrage on the profession, and is putting the public wards to an improper use. We contend that, when public wards were opened and medical and surgical staffs appointed, it clearly was the intention that this was done in the interest only of those who entered as paupers. It was never intended that a patient in good circumstances could make use of these wards and claim free attendance because he did so. This is a complete perversion of the spirit in which public wards were founded. Charity is for the pauper—not for the pauper in spirit, the impostor, who desires to receive what he does not pay for.

Then comes the dispensary abuse. The community generally are able to earn enough money to obtain food and clothing. After the most careful inquiry, we are of the opinion that the great majority of those who go to the free dispensaries, could pay something for their attendance. Because this attendance is free, a great many go to these dispensaries who have very little the matter with them. More than this, they go from one charity to another, and obtain the advice of a number of physicians and surgeons. All this should, and could, be stopped. Such an abuse is not to be found in any other calling in life. It is just possible that things would be better if all the free dispensaries were closed, and let those who can pay for their attendance do so, and the really poor go to some physician known to them, and be treated in this way. We do not think there is a physician or surgeon

in the country who would not willingly prescribe for a poor person without the first thought about his fee. If dispensaries must exist, active steps should be taken to protect the general practitioners against the attempts of those who can pay, but desire to escape paying, by going to a free dispensary. The amount of service which medical men are giving to those who are not entitled to it, is annually very large, and, we are satisfied, is annually on the increase.

The movement on foot to lessen these abuses, both of hospitals and dispensaries, meets with our hearty approval.

DOMINION REGISTRATION.

Probably before this number has reached our readers, the question of medical registration in Canada will have been discussed at the meeting of the Canadian Medical Association. Dr. Thomas G. Roddick deserves much credit for his untiring efforts to bring about a modification of the system now in vogue in this country. In his address to the graduating class in medicine of McGill University (*Montreal Medical Journal*, August) he makes some reference to the subject, and gives certain advice to the graduates, from which we will quote as follows, for the benefit of recent graduates from other universities: "As you are aware, a movement is on foot to establish a Dominion Medical Council, whose license to practise shall be general throughout the Dominion. In view of the possibility of some such scheme becoming law within the next year, I should strongly advise those of you who have no fixed plans to keep up your studies, with a view to passing the examination before that Board in the near future. In the event of a failure of the measure, and, in any case, I wish to impress upon you the advisability of taking out your provincial license, as you originally intended. This will not involve any additional cost. You can, however, do much towards the success of the scheme by advocating it in the various parts of Canada where your homes are situated, or where you settle in practice. Make it plain that there is no intention on the part of the promoters of the measure to interfere in any way with the rights at present enjoyed by the Provincial Licensing Boards. Those, who so

desire, will continue as before, to examine and issue licenses to practise in their own province. The main objects of the movement are to improve medical education in Canada, to obtain reciprocity with Great Britain, to open the whole Dominion, and, indeed, the Empire, to deserving men, and to break down the barriers which at present exist between the various provinces. Any one of these is, I think, deserving of your support. We shall, therefore, look to you to lend us a helping hand."

OUR SUMMER RESORTS.

For many years it has been the fashion for a large portion of our community to take a holiday, especially during the months of July and August. These months are chosen chiefly as a matter of convenience, because it is the school holiday season for the children. As far as Toronto is concerned, it is probable that the Muskoka District is the most popular place for a summer outing. Some say that the air of Muskoka is so healthful that they derive great benefit from a visit there on that account. That is probably true, but the same people can find air quite as good and quite as healthful one mile north or one mile east of Toronto.

It is really not change of air that we want so much as change of scene and change of occupation. We may get as much benefit while living in a tent at Balmy Beach or Long Branch as we could while more fashionably housed in some palace hotel (there is none such there at present, by the way) in the Muskoka region. We might, as a fact, do much better in the tent than in the hotel. We have no desire, however, to discuss the relative merits of a tent and a hotel. We should allow our own patients to make their own choice in such matters.

We should, however, be solicitous respecting the sanitary condition of the places chosen for the summer outing. It is a sad thing to have children, who have left their homes well, brought back with disease contracted in the camp or the hotel. People once thought that anything in Muskoka would answer for their families; but, happily, that time has gone. Partly as a consequence of the demands of their patrons the proprietors

of summer hotels and boarding houses in Muskoka have in recent years greatly improved their premises in a sanitary way. Dr. P. H. Bryce, the Secretary of the Provincial Board of Health, has done much during the last few years in the way of educating the Muskoka folk in such matters. We are glad to be able to say that, as a general rule, the sanitary condition of all hotels in Muskoka is good. Ten years ago, on the other hand, we would have been compelled to say that the sanitary condition in many, if not the majority, was bad.

UNIVERSITY RESIDENCE.

About ten years ago, when a proposal was made to abolish the College Residence of the University of Toronto, a strong protest against such action was made by Sir Daniel Wilson on behalf of himself, the Chancellor, the Vice-Chancellor, the Faculties of the University and University College, the Board of Trustees, the subscribers to the fund for the restoration of the University, the great body of graduates, and many others whose sons had lived in Residence. There seemed then to be such a general consensus of feeling in favor of retaining the Residence that the Government decided not to interfere.

Recently another proposal has been made to abolish the Residence; and, strange to say, the initiative has been taken by the College Council. The following reasons have been given by the President of the University and the Minister of Education: The Residence has not during the last few years been self-sustaining; out of eight hundred students or more only twenty have been in residence; the rooms are out of repair, and it would take a large sum to make them habitable.

This very unsatisfactory condition of things calls for a radical change of some sort. Those who propose to abolish the Residence say that the portion of the University building which has been used for residential purposes should be converted into lecture rooms or laboratories. In 1887 the University architect investigated the matter, and reported that such a conversion would be so extensive that it would be better to pull down the whole structure and build anew. In referring

to this report Sir Daniel Wilson said: "But such a procedure involves the sacrifice of all the money expended in the erection of a residence without any equivalent advantage."

Without attempting to discuss the various phases of the question, we have only to say that the abolition of the College Residence would cause the deepest regret among the graduates of the University. Even on the grounds of economy we are inclined to agree with Mr. John King, that the best thing to do now is to renovate the present building so as to make it habitable. It would then attract a large number of students, and under proper management there would be no deficit. In fact, it might become a source of revenue, as it was in times past, as, for instance, under the *régime* of Professor Baker.

We learn that the Governors of the Toronto Western Hospital have secured a site of four acres on the corner of Bathurst and Nassau streets; and that active steps are now in progress to furnish the very best accommodation for a large number of patients.

Grace Hospital (formerly homœopathic) has been converted into a general, and, as a result of the conversion, the following appointments have been made on the staff: Medicine—Dr. W. Nattress, Dr. R. A. Pyne, Dr. R. A. Stevenson and Dr. A. Lynd. Surgery—Dr. G. P. Sylvester, Dr. J. H. Cotton and Dr. Holford Walker. Eye, Ear, Throat and Nose—Dr. Palmer. Obstetrics—Dr. J. H. Cotton. Bacteriology—Dr. Westman. Outdoor Department, Dr. J. T. Clark (secretary), Dr. D. W. McPherson, Dr. W. H. Harris, Dr. T. Coleman, Dr. W. J. O. Malloch and Dr. J. H. McConnell.

Personals.

Dr. Adam A. Beatty, of Toronto, was married in August to Miss Norris.

Dr. Arthur Jukes Johnson has returned with his family from the seaside.

Dr. Jerrold Ball, of Toronto, left for England July 9th. He will return shortly.

Dr. Clarence H. Sills, of Picton, spent a portion of the summer in London, England.

Dr. George A. Bingham, of Toronto, was married in August to Miss Emma Wilson.

Dr. W. P. Caven, of Toronto, is recovering from a mild attack of typhoid fever.

Dr. Allen Baines and Judge Morson left Toronto for the Pacific Coast, August 1st.

Dr. Thos. B. Fletcher, of St. John's Hospital, Baltimore, spent a few days in Toronto early in August.

Dr. Thos. McCrae spent the greater portion of the summer in Gottingen. He will return to Baltimore in September.

Dr. G. Sterling Ryerson, who spent a portion of the season with his family at his summer residence, Bobcaygeon, has returned to Toronto.

Dr. Chas. O'Reilly and Mr. Walter S. Lee left Toronto, August 3rd, for Winnipeg. From there Drs. O'Reilly and Baines went on to Vancouver, where they remained a few days, and then returned by way of Rossland.

Professor Wm. Osler, of Baltimore, has spent the greater portion of this summer with his family in a cottage in Dorsetshire, England. He, however, spent some time in London, and also attended the meeting of the British Medical Association at Portsmouth.

Obituary.

WILLIAM WELLS, M.B.

We have to announce with deep regret the death of one of our most promising young graduates, Dr. W. Wells, which occurred at Ailsa Craig, August 23rd, 1899. He was a son of Rev. Mr. Wells, Holland, Manitoba. He graduated from the University of Toronto last spring with high honors, being the gold medallist. He also held the Reeve Scholarship. A few weeks ago he was appointed house surgeon to St. Michael's Hospital, Toronto. He went to Ailsa Craig for a well-earned holiday, and while there contracted typhoid fever, complicated with pneumonia. He was generally recognized both by members of the Faculty and fellow-students as one of the University's most worthy and gifted students. His death has caused the deepest grief among his many friends.

THOMAS BENJAMIN DACK, B.A., M.D.

Dr. Thos. B. Dack, one of the best known physicians of the County of Simcoe, died at his home in Creemore, July 14th, 1899. He had a slight attack of paralysis last February, from the effect of which he never fully recovered, although he improved so much that he was able to attend to his practice for a time. About the end of June he was compelled to give up work on account of severe nervous prostration. From July 1st he failed somewhat rapidly, although there were no urgent symptoms indicating any serious organic lesions.

Dr. Dack was born in Ireland, and came to Canada when a boy. He took both an Arts and a Medical course in the University of Toronto, receiving B.A. in 1849, and M.B. in 1863. He had seen much of the world, and had a variety of experiences in the gold fields of Australia, among the Maori of New Zealand, in Brazil, and in an ocean steamer after graduating in medicine. After he grew tired of travelling he commenced practice in Toronto, where he remained for only a short time. He then went to Creemore, where he lived about thirty-five years. His practice was large, and he was highly respected. He took considerable interest in politics, and was a member of the Municipal Council for several years. He came from Cromwellian stock, and was a life-long Liberal. He was an Irish gentleman of the good old sort, a genial companion, a generous host, a charming man in all respects, and an excellent physician.

Book Reviews.

Pyorrhea Alveolaris, and Its Relation to General Medicine.

By JOHN FITZGERALD, L.D.S., Dental Surgeon to the Italian Hospital, and to the National Hospital for Diseases of the Heart and Paralysis, Soho Square. London: The Medical Publishing Company, Limited, 22½ Bartholomew Square.

This little volume of 57 pp. is beautifully gotten up as to the matters of paper, type, illustrations and binding. The reading-matter is excellent. The book contains a number of valuable formulæ for application to diseased and suppurating gums. The surgical treatment is carefully explained. The causes are given as tubercle, gout, syphilis, debility, and local gingivitis from irritation. The bad effects of pus in the mouth, and its constant absorption into the system through its mucous membrane, and from the stomach are pointed out. Attention is given to the local action of the swallowed pus upon the stomach. The book merits a wide perusal.

The Mineral Waters of the United States and their Therapeutic Uses, with an account of the various mineral spring localities, their advantages as health resorts, means of access, etc. To which is added an appendix on potable waters. By JAMES K. COOK, A.M., M.D., Adjunct Professor of Clinical Medicine and Physical Diagnosis at the New York Post-Graduate Medical School; attending physician to the Post-Graduate Hospital; etc., etc. Lea Brothers & Co., New York and Philadelphia. 1899.

An octavo volume of 600 pp. should contain a good deal of information; and it can be truthfully said that such is the case with regard to this volume. It is full of information on the mineral waters found in the United States, their uses both for external and internal medication, the nature of the localities where the waters are found and the chemistry of these waters. It is really a handsome and very valuable work.

Over 1,000 Prescriptions or Favorite Formulæ of Various Teachers, Authors and Practising Physicians. The whole being carefully indexed, and including most of the newer remedies. Cloth, 300 pages, postpaid \$1.00. The Illustrated Medical Journal Co., Publishers, Detroit, Mich.

This is the second edition of this handy manual, and is just from the press: it has nearly 100 pages of new matter added.

As the practical worth of this kind of a book consists in its having a handy and complete index, this book has it, for some 16 pages of small type are devoted to this object, and some of the lines have as many as 20 different references to as many different formulæ; this would go to show that there are 2,000 different prescriptions given in the volume. In other words, taking the price of the book into consideration (\$1.00), it would argue that there are furnished some 20 different prescriptions for one cent. We notice that many of the newer remedies are among the prescriptions, thus bringing the treatment of many of the diseases down to date. Both old and new writers of both home and foreign countries are represented among its formulæ.

Blank pages are frequently introduced, so that a handy place is furnished for recording any new prescription that one might wish to preserve. The printed index will index all such pencilled additions, if care is taken to write them opposite a page with a formula for similar disease; this would then save the bother of indexing the pencilled additions.

Circumcision—Its Moral and Physical Necessities and Advantages.

Dr. A. W. Taylor, of Beverly, in an essay on this subject, said that the operation of circumcision was 3,797 years old, the first operation having been done on a person ninety-nine years old, and the next on his son of nineteen. The operation had evidently had its foundation in sound physiological reasons. There could be no doubt that the original divine decree had been intended as a sanitary precaution. Circumcision was the oldest of all surgical operations. Not all cases of congenital or inflammatory adhesions of the prepuce to the glans were continued to adult life, but circumcision and the removal of these adhesions contributed largely to the comfort of the individual. It was not necessary that the constriction should be complete or the prepuce narrow and long to give rise to severe nervous symptoms. The organ was exceedingly sensitive to mental or local irritation. Phimosis was responsible for a long series of formidable symptoms. The speaker was of the opinion that not infrequently marital unhappiness would be better relieved by circumcising the husband than by suing for divorce, and that a man, before marrying, should be examined with this operation in view should it be indicated.—*Medical Review.*

Selections.

Catarrh of the Stomach.

Simon, of Vienna, uses small doses of sulphate of sodium for the treatment of this condition. He usually gives from ten to fifteen grains of it in about six ounces of hot water, and, under these circumstances, the catarrhal condition of the stomach, with its hyperacidity, passes away, and the sensations of pain and discomfort in the epigastrium, with nausea, are relieved. This method of treatment is supposed to do good by improving the motor power of the stomach.—*Gaillard's Med. Jour.*

Chronic Affections of the Intestinal Canal.

"A limited trial of tannigen leads F. H. Williams to think that it is an excellent astringent when such action is desired upon the intestinal mucous membrane. Since its advent into therapeutics it has been chiefly utilized in chronic affections of the intestinal canal, and has been recommended by Müller and Künkler especially in the diarrhea of phthisical patients. Richard Drews has published the results of his experiments with tannigen in fifty cases of various intestinal diseases of childhood, which, in his opinion, demonstrate sufficiently the curative effects of tannigen upon the diseased intestinal canal, and prove that this remedy is efficient in a larger number of cases than those previously in use, such as calomel, benzoate of soda, bismuth, naphthalin, etc. Unlike Künkler, Drews finds that the remedy is as useful in acute as it is in chronic catarrh of the intestinal canal. In acute enteritis and gastro-enteritis doses of 3 to 8 grains, three times daily, in connection with regulation of the diet, effected a more rapid cure than any other method of treatment. The author advises that, after the disappearance of the catarrhal symptoms, the drug be continued for two or three days, to remove any remaining intestinal irritation and prevent recurrences. He states that tannigen is an excellent remedy in the intestinal diseases of childhood, producing a prompt cure by virtue of the astringent and antibacterial properties of tannic acid. Apart from this, it has the advantage over similar remedies of being tasteless, odorless, and of not disturbing the gastric functions, and of being perfectly innocuous, even when administered for a long time. For the latter reason it can be prescribed in knife-pointful doses for poor patients. Moncorvo has used tannigen in twenty-one cases of intractable diarrhea, usually malarial in origin, and in many cases complicated by hereditary syphilis or tuberculosis. It was easily administered in julep, and invariably well borne,

Its action was prompt, certain and effectual, both in chronic and acute diarrhea. In the province of antiseptics—such as salol, salicylate of bismuth, etc.—it lost none of its power, and Moncorvo strongly recommended the combination in cases where the fermentation processes in the large intestine are very active.”—*Annual of the Universal Medical Sciences*.

Dionin.

Dionin, according to Dr. J. Heinrich, is the most valuable of all the morphine substitutes heretofore introduced as a cure in the morphine habit. It is particularly useful because of its very ready solubility, and because its solutions are absolutely neutral in reaction, hence insuring painless injections. So far as the dose is concerned, the author finds that about one-third more is required than when morphine is given, but the exhilaration following the injection is not nearly so great as that following morphine; therefore, all danger of a habit is obviated. A slight itching of the skin is usually observed a few minutes after the exhibition of the donin, just as generally follows in injection of morphine or any of its derivatives. The itching, however, disappears in at most ten minutes, even when of the most aggravated form. The good action of the dionin is ascribed to its not causing exhilaration, or conditions resembling it, and to its great solubility, in consequence of which it is rapidly absorbed, and as rapidly eliminated. This latter prevents any cumulative action; and it makes little difference by what channel it is eliminated, whether by the gastric mucosa, and from here passed into the intestines and voided with the feces, or whether, as Landsberg assumes with morphine, it passes into the blood circulation gradually from the subcutaneous cellular tissue, and is decomposed by the alkalinity of the blood, or the gases in the latter, or perhaps by some ferment, so that only a part of the dionin is excreted unchanged. In conclusion, the author states his belief that dionin is also useful in many other cases as a valuable substitute for morphine.—*Merck's Archives*.

Largin.

Largin has been successfully used by Dr. Stark in sixteen cases of gonorrhea, comprising eight cases of acute anterior urethritis, four cases of subacute anterior urethritis, and three of subacute posterior and anterior urethritis, and one of incipient gonorrhea. In the first fifteen cases the gonococci rapidly disappeared, without any irritation being experienced by the patients. In subacute anterior urethritis the remedy was also found to be very good, and this was the more remarkable because in the subacute processes the gon-

The Canadian Practitioner and Review.

VOL. XXIV. TORONTO, OCTOBER, 1899.

NO. 10.

Original Communications.

INFANT FEEDING AND INFANTILE DIARRHEA.*

BY J. T. FOTHERINGHAM, M.D.

Mr. President and Gentlemen of the Canadian Medical Association :

My first duty, as it is a pleasure, is to express my high appreciation of the compliment paid me by yourself, Sir, and your committee, in inviting me to read the Address in Medicine before our National Association, an association which exercises the hegemony among all the medical societies of the country, as the country does among the colonies of the Empire. Permit me to suggest, in passing, that in my opinion our Association has borne no insignificant part, and will bear yet a much greater part, in the forging more closely of the chains that bind into one the once disunited portions of the Canadian unit in Britain's congeries of nations. For you notice that I refer to it as a National Association. I think, too, that I may safely prophesy, though neither a prophet nor the son of a prophet, that we shall from this date gain greatly as an association by the rising tide of national sentiment, a tide which has risen, I rejoice to say, only more slowly than that greater, more beneficent tide, like the tide of our Mother Land's own universal ocean, the tide of Imperial sentiment and of quickened love for the Greater Britain, the wide world over, of which we as a nation form only a part—indeed, I need only point to the unprecedented success of the present meeting as a proof of the upgrowth of the sentiment of Canadian solidarity, for without that sentiment even the skilful and energetic management of the committees of the Association would have been much less fruitful of results—but I must ask your pardon for a digression so far removed from the subject of my paper, and come

* Prepared for the Canadian Medical Association, Toronto meeting, 1899.

back to the sober fact that I have undertaken a task which I feel is too much for me. I can pretend to no very special knowledge of the subject beyond that which careful reading and conscientious clinical observation can produce, and cast myself upon your indulgence, with the request that the discussion to follow may be free, and with the hope it may be helpful both to myself and to us all. The selection of a subject was difficult, and I was influenced in my choice mainly by the fact that it is at this time the one specially prominent in practice. I can assure you that I feel my own limitations, and that, as may seem right and proper in the discussion of this particular subject, I have the mind "even of a weaned child."

The importance of the subject need scarcely be insisted upon before an audience like this, to whom the preventability of the "Slaughter of the Innocents," caused by diarrheal disorders, is coming to be known. I have pleasure in presenting to you the following tables, kindly prepared for me by Dr. D. McGillivray from statistics placed at my disposal by Dr. P. H. Bryce, of the Provincial Board of Health, to both of whom my thanks are due. These tables have reference to the city of Toronto and the Province of Ontario, and constitute a powerful argument for an educational campaign by this Association against public ignorance in the matter of infant feeding. Yet even among ourselves it may be well to look for the beam in our own eyes. I was struck recently by the forceful character of some of the remarks of Mr. Marmaduke Shield in a lecture given in St. George's Hospital, in London, "On the Management of Some Cases of so-called Simple Fracture." After expressing surprise and regret at the little importance attached by students, and "especially," he says, "junior practitioners" to the study of these common accidents, he goes on, with, I fear we must admit, great truth, to single out this very disorder, as follows:

"It is the same in medicine; obscure maladies, which usually terminate in pathological investigation and speculative methods of treatment, fascinate the modern student more than the treatment of pneumonia and infantile diarrhea. All must fly before they can swim. I regret to say that one cannot excuse teachers and examiners from complicity in fostering this hollow and foolish tendency in modern clinical education. It is most detrimental to after success in practice and reputation."

After undertaking the preparation of a tabulated statement of the incidence of infantile diarrhea, I found that only for the past two years has a satisfactory method been in vogue in the Registrar-General's Office. The Bertillon classification of diseases now adopted is very satisfactory, but previous to 1897 cholera infantum, diarrhea acuta and dysentery acuta were so

mixed up that absolutely accurate statistics cannot be compiled for my purpose. The accompanying tables will clearly show, however, (1) The incidence of the disease by months, July and August, having an especially bad pre-eminence; (2) The enormous preponderance of deaths from infantile diarrhea before the end of the first year, the remarkable falling off in the second year, and the still more marked "zone of safety" upon which the child enters with the third year, so far as diarrheas are concerned.

Taking the figures for 1897 for Toronto, as a basis, it will be seen that 31.23 per cent. of all deaths in Toronto occur under one year, and that 5.15 per cent. of all deaths are due to diarrhea under one year. Of the total deaths under one year (977) diarrhea causes 161, or 16.48 per cent. These figures compare distinctly favorably as regards infant mortality with those given for the larger American continental centres.

Further calculations show that there are more than three times as many deaths from all causes in the first year than in the next four years of life put together.

As regards the season of greatest incidence the figures show with the greatest monotony the decided beginning of the epidemic in June, its worse incidence in July, though during August it remains almost as severe, a drop to about one-half in September and its disappearance in October.

TABLE I.—TORONTO.

Showing infant mortality under five years, of diarrhea. (For 1897 and 1898, figures are for three years and under.) It shows also incidence by months, and incidence by years of age.

	1898.	1897.	1896.	1895.	1894.	Totals.
January	1	..	1
February	3	1	2	1	1	8
March	2	..	1	..	1	4
April	2	2	1	1	2	8
May	1	1	4	5	..	11
June	3	13	16	10	3	45
July	53	22	65	77	61	278
August	48	64	48	53	60	273
September	38	46	17	34	21	156
October	25	14	2	12	8	61
November	4	5	1	1	2	13
December	4	5	2	1	3	15
Totals.....	183	172	159	196	162	
1st year.....	173	161	150	178	136	
2nd year.....	9	10	
3rd year.....	1	1	9	18	26	

550 INFANT FEEDING, INFANTILE DIARRHEA.

TABLE II.—SIMILAR TABLE FOR PROVINCE OF ONTARIO, 1897.

Total deaths, 25,307; total deaths from cholera infantum and infant diarrhea, 1,082; that is, about one in every twenty-five deaths in the Province was due to this disease.

January.....	13	July.....	166
February.....	18	August.....	338
March.....	14	September.....	293
April.....	13	October.....	103
May.....	12	November.....	25
June.....	52	December.....	18

1st year.....	925
2nd year.....	121
3rd year.....	11
4th year.....	25

Total..... 1,082

TABLE III.—TORONTO.

	1898.	1897.
Total deaths from all causes.....	2,871	3,122
Under one year from all causes.....	875	977
Under two years from all causes.....	85	91
Under three years from all causes.....	41	62
Under one year from diarrhea.....	173	161
Under two years from diarrhea.....	9	10
Under three years from diarrhea.....	1	1

Investigation from these figures shows that 36.2 per cent. of the total mortality occurred under three years in 1897, and 34.86 in 1898, also that 31.23 per cent. of the total mortality occurred under one year in 1897, and 30.47 per cent. in 1898. We find, too, that 5.15 per cent. of all deaths occurred from diarrhea under one year of age in 1897, and 6.02 per cent. in 1898; and that of all deaths under one year in 1897, 16.48 per cent. were due to diarrhea, and no less than 19.77 per cent. (one in five practically) in 1898.

TABLE IV.—TORONTO.

	1898.	1897.	1896.	1895.	1894.
1st year.....	875	977	935	979	933
2nd to 5th year.....	192	271	243	303	268

TABLE V.—TORONTO.

Number of deaths from diarrhea per 1,000 infant deaths occurring under five years and under one year.

	1898.	1897.	1896.	1895.	1894.
Under 5 years.	171.5	137.8	135.0	152.9	134.8
Under 1 year	197.7	164.7	160.4	171.6	145.7

Seibert's interesting investigations show that the temperature curve corresponds identically with the mortality curve of diarrhea. He says that an average minimum temperature of about 60° F. is needed to start the epidemic, and that it must continue about a week before any marked increase in the number of cases is noted. Holt suggests that the very sudden rise in July is due to the debilitating influence upon susceptible infants of the heat of June—not to any special malignity of the "Dog Days" of July, for the average temperature of July is only 4° F. or 5° F. higher than that of June and August. The figures for Toronto show much greater persistence during August than in New York, where the mortality *over* three years is just about half as great as in July, the total deaths from diarrhea in Toronto for the five years, 1894-98 inclusive, being 278 for July, 273 for August, 156 for September, and only 44 for June and 61 for October.

TABLE VI.—SHOWING TEMPERATURE DETAILS FOR YEARS 1894-98 (INCLUSIVE).

	JUNE.			JULY.			AUGUST.			SEPTEMBER.		
	Average Temp. for month.	Difference from average for 58 years.	Highest daily Temp. during month.	Average Temp. for month.	Difference from average for 58 years.	Highest daily Temp. during month.	Average Temp. for month.	Difference from average for 58 years.	Highest daily Temp. during month.	Average Temp. for month.	Difference from average for 58 years.	Highest daily Temp. during month.
1894.....	66.45	+4.24	90.7	69.10	+1.48	89.19	65.29	-0.09	85.1	62.25	+3.72	84.1
1895.....	67.90	+5.61	93.1	66.23	-1.41	90.0	65.09	-1.17	84.0	60.63	+2.03	93.1
1896.....	64.75	+2.36	86.3	68.72	+1.10	91.3	67.49	+1.25	89.9	57.41	-1.22	86.3
1897.....	61.3	-1.12	84.4	72.11	+4.49	93.3	64.75	-1.54	82.8	60.84	+2.23	93.2
1898.....	65.42	+3.01	90.5	70.5	+2.79	95.5	69.72	+3.48	96.0	62.8	+4.15	97.1

You will have noticed that in 1897 the mortality for July was only 22, while in the other four years of the series it was 53, 65, 77 and 61. So remarkable a difference called for some

explanation, which lies ready to hand in the accompanying Table No. VI., showing among other particulars, the average temperature for June, July, August and September for the five years to which the mortality tables apply. The exceedingly interesting fact is thus elicited that the July for which the mortality was so low, was preceded by a June in which the average temperature was only 61.3° F., nearly 4° F. lower than the lowest June in the series, and nearly 7° F. lower than the highest June of the series. This July of low diarrheal mortality, however, was itself much the hottest July of the series, 4.49° F. hotter than the average July in fifty-eight years. We find, consequently, that the August following had a mortality of 64, much the highest August in the series, and was followed by a September of exceptionally high mortality, 46. In other words, the epidemic of 1897 was delayed a whole month by the low temperature of June. The months of greatest mortality were August and September instead of July and August, and the net result was the same as in an average year.

Seibert's view as to the correspondence of the heat-curve with the mortality-curve is thus amply borne out by the data for Toronto, as is also his statement that an average of at least 60° F. is necessary for the development of the epidemic. And Holt's theory that the heat of June is the cause of the July mortality is strongly confirmed.

Jennings, of Detroit, in the Address in Medicine before the Michigan State Medical Society this year, tells us that "in Detroit, for the year ending July 1st, 1898, 35 per cent. of the total deaths were under the age of five years, and 25 per cent. under the age of one year. Most of the deaths under one year are due to nutritive disorders directly or indirectly the result of improper feeding."

If further argument were needed, one might quote Emmett Holt in his address of last year to the American Pediatric Association, in which he states that during the past eight years, of 151 children left under his care during their entire infancy, not one had died, though only thirty of the number were breast-fed during the most of the first year, and ninety were entirely bottle-fed. From inquiry among physicians in New York in the same field of practice, Dr. Holt further concludes that "in the well-to-do classes, with the best care, the mortality from all causes during infancy does not exceed 2 or 3 per cent., as against a general mortality for this period among all classes of about 20 per cent. These are most healthful signs, and show the possibility of a very great reduction in infant mortality everywhere with a better understanding of all conditions, but especially of infant feeding."

As regards the title of my paper, I wish to say beforehand

that I intend referring to infant feeding only in so far as it is a cause of infantile diarrhea, and of course, also in so far as it bears upon treatment. The feeding of the normal infant I do not intend to take up, more particularly as the programme includes a paper upon this subject from my friend Dr. A. R. Gordon, of this city.

After a *résumé* as concise as possible of our present knowledge of the physiology of infant digestion it would seem logical to proceed to the discussion of the bacteriology and pathology of infantile diarrheas, and, therefore, endeavor to classify them in various ways, upon bases clinical, anatomical and bacteriological in hopes of clarifying our thinking and rendering our diagnostic habits more orderly and exact. The main part of the paper will then follow, a discussion of the treatment of these affections, dietetic, hygienic and medicinal. The drugs recommended I think it better to treat by themselves, in groups, as stimulants, digestives, purgatives, astringents, antiseptics, sedatives, and so on.

With regard to the physiology of infant digestion, it differs, as is well known now, in certain important respects from that of adult digestion. Rotch divides the life of a child as regards nutrition into three periods—first, the first year; then the second and third years; and third, the remainder of childhood. The natural aliment for the first of these periods is, of course, breast milk. First, as regards digestion in the mouth. During the first year, at any rate till the teeth appear, the mouth bears little relation to digestion, less than in adult life, its function being merely the mechanical one of sucking. The saliva is practically absent, being unneeded, till the tenth or twelfth week, and with the advent of the teeth and the possibility therefore of less fluid dietary, the saliva becomes more abundant and much more actively diastatic.

Then as to the stomach. First, as to its capacity, the interesting measurements given by Rotch and others may be boiled down for all necessary purposes to the following:

- 1 oz. at birth.
- 2 ozs. at two weeks.
- 6 ozs. at six months.
- 9 ozs. at twelve months.
- 12 ozs. at eighteen months.

The position of the organ in the baby is more vertical than in the adult, mainly because of the undeveloped condition of the fundus, which practically does not exist till the teeth begin to come and the diet to be altered, a very interesting point if we remember the physiology and functions of the adult fundus.

The secretions of the stomach are three, pepsin, hydrochloric

acid and the rennet ferment, Hammarsten's lab-ferment. The latter is much the most important of the three, as it is the precipitating agent, causing coagulation of the proteids.

The functions of the stomach then are mainly twofold. First, it is a reservoir, and second, it coagulates the proteids and sends them on for intestinal digestion. To these two duties of course must be added the partial digestion of proteids (usually only very partial), and the absorption of fluids, peptone and crystalloid material, *e.g.*, sugar.

The stomach of the nursing baby under one month is usually empty one hour or a little more after feeding. This period slowly lengthens until at eight months or so it takes two or three hours to empty its contents into the duodenum. This is very interesting when considered in connection with the normal physiological interval for feeding, the child up to two or three months usually insisting upon being fed every two hours, and the interval gradually lengthening to three or three and a half hours. So that the infant if left to itself will, by the promptings of animal instinct, give the stomach quite the same proportion of physiological rest as the adult does, indeed probably much more punctiliously than most adults do. The duration of stomach digestion is much prolonged if cow's milk is the food, or if disease exist.

Third, as to the intestine. This is much the most important portion of the alimentary canal. It is less closely tethered up by the mesentery than in the adult—the duodenum is much smoother and freer from folding and pouching than in the adult, a circumstance connected, as Rotch points out, with the fact that there is less need for delay of its contents in the infant than in the adult.

It is interesting, too, to note that while in the adult a ratio in length between the large and small intestine is, respectively, about as five to one or one and a half, in the infant it is as nine to one and a half, a fact suggestive of the great importance of the small intestine in the child, and portentous as to the ill-results in the infant of derangement of its functions as in cholera infantum.

The most active secretion in the small intestine, as in the adult, is the pancreatic juice which is active in the digestion of fats from the very first, and which digests the larger proportion of the casein from the stomach. The large size of the liver at birth bespeaks the importance of the bile as a peristaltic stimulant, and as an assistant in the digestion and absorption of the fat which the nursing infant gets in such large proportions. The bile doubtless assists in preventing in the infant the constipation which would prevail in the adult upon a similar diet.

The colon, as in the adult, is a reservoir for feces, digestive power being absent and absorptive power slight.

We turn now to the bacteriology and pathology of the alimentary canal.

Normally at birth the whole canal is sterile, but in a few hours bacteria are found throughout its whole length. The stomach, as a rule, is practically free, except in disease, but in the intestine there are two obligatory or constant forms. Escherichs was one of the original investigators in this direction, and Krus, Biedert, Baginsky, Lesage and many others have added to his work. On this side of the water, Booker's exhaustive investigations are indispensable to any one wishing to study the subject, especially his communication in the Johns Hopkins Hospital Reports, Vol. VI., 1897. It has been found that the two obligatory bacteria in healthy nurslings are *B. lactis aerogenes* and *B. coli communis*. The first form thrives in the presence of milk sugar, and is, therefore, most abundant in the upper parts of the small intestine; the *B. coli communis*, as its name implies, prefers the lower small intestine and the colon. In diseased conditions these normal relations are disturbed and the bacteria are formed in enormously increased numbers in other than their own portion of the canal, with new-formed and greatly increased toxicity, and in company with others of upwards of thirty different varieties in different cases as studied by Booker, and including various micro- and strepto-cocci and bacilli the exact bacteriological condition cannot, of course, be clinically determined in each case, but it may vary from the simple non-inflammatory dyspeptic diarrhea with no bacterial abnormality, to the severest streptococcic gastro-enteritis, with all sorts of bacterial combinations and grades of clinical severity between, which, of course, makes classification very difficult, as we shall see. Various forms of *Proteus vulgaris* are common, and usually in severe cases.

As regards the pathology of infantile diarrhea, it is not necessary that I should occupy your time with any discussion of the lesions of the alimentary canal. I prefer to pass on to a brief statement of the lesions found secondarily in other viscera. Suffice it to remind you that the most fulminant cases may be those in which death is due to toxins which leave behind but little trace of damage to the alimentary mucosa anywhere; while in other cases, the mucosa is found in any stage of destruction, from mere hyperemia and superficial loss of continuity to severe inflammation with infiltration of leucocytes, erosion, necrosis and sloughing right through to the serous coat, luxuriant bacillary invasion of the tissues of the bowels and chronic ulceration of the bowel if life be sufficiently prolonged.

From the classical investigations of Booker we gather information which I have summarized as follows: as to the morbid anatomy of the other viscera.

I. In acute cases:

1. The spleen—always hemorrhagic, large and juicy, with distended vessels and extravasations, and often focal necrosis in the lymph nodules like that in the solitary glands in the intestine—is frequently infiltrated with the same bacteria as found in the intestine.

2. The liver—nearly always engorged with blood, the cells separated by widely distended capillaries and showing fatty degeneration or becoming necrotic.

3. The kidneys—some cases show presence in kidney tissue of the intestinal bacteria, *B. coli comm.* and *B. lactis aerog.* Every case shows necrosis of epithelium in convoluted tubes—the capsules of the glomeruli sometimes show signs of inflammation or are plugged with coagulated albumen, and the tubules sometimes contain hyaline casts, especially if the case is somewhat chronic—the kidney as a whole is usually enlarged, congested, with marked striations, and capsule stripping off easily.

4. The lungs—give cultures of bacteria more frequently and with greater luxuriance than any of the other viscera, *B. lactis aerog.* and *B. coli communis* most commonly, Booker saying expressly that “the gastro-enteric canal is the starting point of the general infection,” and that “the same bacteria found in cultures from the stomach and intestines appear in cultures from the other organs.”

Lobular hemorrhages of greater or less extent are often seen; the bronchial tubes are more or less filled with mucus, and broncho-pneumonia of more or less severity exists, always recognized as an almost necessarily fatal complication.

II. In chronic cases, meaning either those which begin without great acuteness or which have survived an acute attack of, say, three weeks (Holt says six weeks), the prevailing lesions are much the same as detailed in acute cases, with difference due to longer duration of the lesion; for instance, the kidneys contain hyaline casts, and show more markedly necrotic condition of epithelium especially of convoluted tubules. In one case Booker noted that “the brain surface was covered with a thick layer of bacteria.”

1. The spleen—of twelve examined, ten showed hemorrhage, sometimes very extensive; six showed focal necrosis in the lymph nodules.

2. The liver—of ten examined all showed great capillary distention, and all showed cell necrosis, often of the entire lobule, and, if less severe, limited to the centre of the lobule.

Miliary abscesses may occur if life be sustained for a sufficient time.

3. The kidneys—of eleven cases only one seemed normal. All the rest showed as the most constant lesion necrosis of the epithelium of the convoluted tubules. Hyaline casts were common. Intracapsular inflammation, though rare, was noted.

4. The lungs—only one case seemed normal out of twelve. Almost constantly, lobular pneumonia of more or less severe grade was seen, with bacterial invasion of lung tissues often very luxuriant and hemorrhage, and sometimes consecutive atelectasis.

As regards relative importance, Booker finds, as clinical experience would lead us to expect, that lesions of the lung are the most serious. Next in importance are those of the kidney, while those of the liver and spleen are neither so constant nor so disabling. Booker states also that "a direct relation between the bacteria and the lesions in the solid organs is seldom demonstrable, except in the lungs. . . . In other organs the lesions resemble those resulting from the absorption of the toxalbumen products of bacteria," such as necrosis of kidney or liver epithelium.

It is accepted as proved that there is no specific organism of the disease, and a very important point is the fact now generally admitted, that the normal bacteria, particularly the *B. coli comm.*, may develop varieties of great toxicity. What the conditions are that produce this variant growth is not yet known. But one proof of the truth of this view lies in the report made by Lesage on his attempts at the serum treatment of infantile diarrhea, in *Rev. de Therap. Med. Chir.*, No. 24, 1896. His serum was obtained from asses after injection with colon bacilli from virulent milk or stools. Twenty-six out of fifty-two children treated with this serum (exactly 50 per cent.) lost all marked symptoms in less than forty-eight hours, fourteen were improved, and twelve unimproved. In all cases where the stools were green the color disappeared after the injections, and what is singular, unless the theory of variation in toxicity of colon bacilli be wrong, he found that the serum obtained from asses after treatment with the colon bacilli of normal stools did not give these results. (Blackader, in Sajous' *Cyclop. Pract. Med.*, Vol. IV.)

As regards the third main head in the plan of this paper, namely, classification, I beg you to bear with me if I first of all lay what may seem to be undue stress upon the importance of it. Diagnosis, oftentimes sufficiently difficult in concrete cases, is manifestly impossible unless we carry in our heads clear conceptions of the varieties of the disorder. Of course we assume that typhoid fever, the acute specific fevers, particularly scarlet fever and pneumonia, and intussusception, are all excluded.

A clinical classification may first be attempted, based upon the symptoms. Thus cases may be :

1. *Acute.* (a) Acute intestinal inflammation from the first, with little constitutional poisoning, thus corresponding to the adult type.

(b) Virulent toxemia or even general infection with little evidence of intestinal lesion.

Or

2. *Chronic*, in which

(a) Intestine shows severe and obstinate ulcerative inflammation, or

(b) Persistent malnutrition and loss of assimilative power with little or no inflammatory process.

Again, while the primary trouble in all cases is the gastro-enteric infection, in some cases the outstanding symptoms soon cease to be those due to lesions of alimentary canal, and come to be those due to lesion in other organs, especially the lungs and the kidneys.

Blackader, of Montreal, in a very helpful and exhaustive article in Sajous' *Cyclopedia of Practical Medicine*, Vol. IV., adopts Booker's bacteriological classification, with a little modification as follows :

1. Dyspeptic non-inflammatory diarrheas, functional due to ingestion of irritants, usually food, and most frequently milk.

2. Inflammatory diarrheas in which the symptoms of a toxic systemic infection are predominant.

3. Inflammatory diarrheas, in which in addition to the systemic infection the local inflammatory conditions produce marked symptoms.

4. Chronic diarrheas, in which the acute inflammatory symptoms have more or less subsided, but in which the stools remain abnormal both in character and in frequency, and nutrition is apt to be much impaired.

This latter class is in our opinion a very useful addition of Blackader's to the more purely bacteriological classification of Booker, which is shortly as follows :

1. Non-inflammatory dyspeptic diarrheas.

2. Streptococcic gastro-enteritis.

3. Bacillary gastro-enteritis.

4. Mixed cases.

The latter class of course includes by far the larger number of cases seen in practice.

Still another classification, and I think the most useful of all, is based on anatomical considerations—and it becomes a duty to decide at once whether a case is one of enteritis, colitis, or entero-colitis, since radical differences exist in the treatment to be adopted in each case. For instance, neither opium nor irri-

gation of the bowel can be said to be so necessary in enteritis as in colitis with small frequent slimy and blood-stained stools, tenesmus, and often prolapse of the rectal mucosa. Nor would bismuth be nearly so useful in colitis as in enteritis, with its large, watery, often foul-smelling dejections.

Coming now to the last and most important subject of treatment, permit me to say first, that the necessity for explicit detailed directions in writing is very urgent in all these cases. Only in this way can you impress upon the lay mind the absolute essentiality of what seems to them unimportant details. Particularly in regard to feeding should orders be written out as to composition of food, and quantity and frequency of feeding. I am accustomed, in my attempt to bring the mother's mind around with a wrench to my way of thinking, to tell her that if I were compelled to choose between medicine and food in the treatment of a case, I should not hesitate to throw medicine away and trust to proper feeding. Yet of course, as we all know, we must usually give some medicine, both for its own sake and as a matter of policy, especially in those chronic cases, which for our sins do sometimes afflict us, unless we actually maliciously wish to encourage our patients to leave us for some practitioner who will give them a small sugar pill every fifteen minutes, an experience through which those of us at any rate who practise in urban communities do sometimes pass.

As regards feeding, I should almost apologize for saying first, that an entire and absolute change of diet is a *sine qua non*, and in acute cases the diet has been of course usually milk. The very great value of prompt intervention in acute cases, and of the giving for twenty-four hours, at least, of nothing but from one to two ounces, every two hours or oftener, of sterilized water, to which a pinch of salt and a taste of sugar, preferably milk sugar, has been added, cannot be disputed. It is borne out clinically and by the fact noted by Booker that "none of the bacteria isolated (from the stools) were found to be capable of multiplying in ordinary hydrant water forty-eight hours after it had been inoculated; in all such cases negative results were obtained." After the first twenty-four hours or so are passed it may be well to attempt the use of some nutritive fluid—and at the outset one must decide whether to use albuminous or farinaceous materials. If the stools are not specially foul albumens may be given, and the best one is probably egg-water. White of egg contains about 10 per cent. albumen, and should be diluted with about ten times the bulk of sterilized water, with a little salt and a taste of sugar, as it is stated by Biedert that a solution of albumen stronger than 1 per cent. cannot be digested as a rule by even the healthy stomach, and it is found in practice

that a "3-6-1 mixture," as it is called (3 per cent. fat, 6 per cent. carbohydrates, and 1 per cent. proteids), is a very generally useful form of modified milk, approximating closely an average breast-milk. Another good albuminous food is the red meat juice in drachm doses added to the water or other fluids that may be in use. Liquid peptonoids, panopepton, and so forth, may be mentioned in this class. As to the farinaceous fluids, they are all of the same type, and may be equally well made from barley, rice, oatmeal, sago, tapioca, corn starch, or arrowroot, so long as one bears certain points in mind. One point is that the more vegetable albuminoids there are the better, and that, other things being equal, the husk and the layers of the grain next it should be boiled as well as the starchy contents of the grain.

Another point is that very thorough boiling is necessary, three to four hours at least, to cause diastatic change and prevent trouble from the indigestible starch. Thorough straining, too, is important. The consistency of a farinaceous fluid should be that of thin to medium cream, such as will pass easily through an ordinary rubber nipple. And now that the nipple is mentioned it is worth while remarking that if the stomach is irritable it is very often due to the fact that the hole in the nipple is too large, and the child swallows too rapidly.

One of the most useful of all the starchy preparations is likewise the oldest, the good old bag of flour the size of the lower half of the forearm boiled steadily for ten hours. The outer shell is thereafter removed, and the firm 'central part, like a piece of soft white bathbrick, grated down and slowly reboiled as required with water to make a gruel of a consistency varying with the age of the child. For children over six months, at any rate, this is a most useful food in diarrheal conditions.

One will often find whey very useful, made either with sherry, or, what I think is better, essence of pepsin or junket-powder. It makes an excellent vehicle for liquid peptonoids or red meat juice.

Fischer, in a recent number of the *N. Y. Med. Record*, speaks highly of very weak cold tea, especially when stimulation is desired, and of an acidulated drink made by adding to a tumblerful of plain boiled and cooled water five to ten drops of dilute hydrochloric or phosphoric acid, and sweetening with a little glycerine (a powerful antizymotic) or saccharin.

It is well on inaugurating the change of diet to try to lengthen the interval of feeding—always bearing in mind the urgent need of water to replace the fluids drained from the tissues by the diarrheal loss. Thus, if a child has been getting four ounces, two of milk and two of barley water every two and one-half hours, one should try to give, instead, say, four

ounces of barley water with a drachm of red meat juice every three to three and one-half hours. As regards temperature, either extreme seems to me bad, particularly in young infants. Some say that the food should always be cold. This may apply to children of ten to twenty months, but in infants of, say, three months it aggravates pain and has no counterbalancing advantage.

The return to milk should be very tentative. Casein should be allowed last, and fat first in the shape of small quantities of cream, say, half to one teaspoonful at each time of feeding, added to the barley water or other farinaceous fluid, and slowly increased. The cream should never be bought as such, but obtained by removing the top two inches from the jar which has been left five or six hours on the ice.

Rachford goes so far as to say that "cream is theoretically never contraindicated, and can do no harm in any form of a disease, but will be found to serve the best purpose in chronic cases, and after the third or fourth day in acute cases." My own clinical experience will hardly tally with the statement that "cream can do no harm in any form of the disease." The same writer goes on to say that "meat broths contain so little albumen and carbohydrates that . . . they may be given at any time, in either acute or chronic cases, but they are specially indicated in a few cases after the first twelve or twenty-four hours' treatment." One danger in their use lies in the fact that they are very apt to be kept far too long after making, for they very promptly turn stale. A contraindication to their use would be foulness of stools or great frequency and copiousness. If the morbid process be mainly a colitis they can be given more freely.

As regards hygienic measures, one of the very first importance is coolness. During the febrile stages one often sees the little sufferers wrapped up so warmly as to add decidedly to the rate of their exhaustion. The room should be quite cool and airy, and not too bright, for the nervous sensitiveness of the patient is sometimes excessive. Cool sponging with alcohol or some toilet water is very beneficial. On the other hand, if the febrile stage is over, many babies are very much the better of the warm water bag in the cradle. Cold feet and hands call for this measure. And it is often most relieving and soothing to the child, especially in that type of extreme fretfulness and restlessness which usually accompanies nephritis when it occurs, to put him in a hot pack. I have been most gratified with the result of this expedient whenever adopted. And even in feverish cases, when fits of abdominal pain come on, the soothing effect of a hot compress over the abdomen is often most marked.

Of course, a child acutely ill should not be mauled or handled nor taken out in the carriage, and so on, but when convalescence has begun the revivifying effect of pure fresh air, as by a sail of a few hours, or an afternoon at, say, Centre Island here, is remarkable. I was never so struck by this as in the case of an American child brought here very ill from Old Point Comfort, Virginia. I saw him, after the warm season was well on, the day he arrived in Toronto, and he was very sick, emaciated and languid. The next day his mother brought him to my house, and I took for granted at the first sight that this was another of her children, so different was the brisk, active and actually comparatively plump child from the feeble sufferer of the day before. I am certain that it was not food or medicine mainly that produced in twenty-four hours so astonishing a change.

Another hygienic measure worth noting is the careful disinfection of the diapers by boiling. And the nurse should be instructed always to keep the last diaper till another one is soiled for the inspection of the physician when he comes.

As regards medicinal treatment, the first drug group to be mentioned, because it is the one first employed, should be *purgatives*. The best of these is usually castor oil, unless forbidden by marked gastric irritability. I usually employ a sweet castor oil, the composition of which I know, containing 99 per cent. of oil, with a little saccharin, essential oil of almonds and an aromatic ether or two. Castor oil has a great advantage of being speedy and painless unless too large a dose is given, and of having a subsequent constipating effect. It has also a mechanical effect, making it specially good in the early dyspeptic stages of the disorder for the sweeping out of curds, seeds and other offending matter.

The only other purgative of repute is calomel. Lesage prefers calomel if the stomach is suitable. He has two ways of giving it—first, small repeated doses, say, one-tenth to one-fifth grain every one-half hour till bowels move if there be slight fever, soft abdomen, little tympanites and copious stools; and, second, one large dose where the case shows high fever, much distention and foul-smelling and scanty stools. The dose he considers should be for an infant under three months one grain; under one year, two grains, and under three years, three grains.

Other purgatives, such as senna, rhubarb, salines, and so forth, are all more or less bulky and unpalatable, or are objectionable in their mode of action.

As regards *stimulants*, alcohol stands easily first. They are nearly always needed, especially after the acute stage is on. And even from the first, alcohol acts excellently as a carmina-

tive, relieving gastric flatulency. An infant does not need in the most extreme cases, say, of broncho-pneumonia, more than two ounces in twenty-four hours, and in diarrheal conditions two to four drachms is usually plenty. It is better to mix the daily portion at one time, say, two drachms in three to four ounces of sterilized water and give as required. I prefer good brandy for babies, as when diluted it is sweeter than whiskey and they take it better. Wines are not usually good, being either too sweet or too acid, and more apt to disagree. Holt says that in the acute gastro-enteric diseases the depletion is often so great and there is so little absorption of food that the patients must, in certain cases, be sustained by alcohol for several days. We need scarcely, however, nowadays add the warning that the drug should not be used simply from routine.

Other stimulants are ammonia, especially as the aromatic spirit, and caffeine, as cold tea or coffee.

Antipyretics as a class have but small place in the treatment of diarrheal disorders.

Quinine I should not recommend at all, both for its unpalatability, and because it upsets the stomach. Besides I can see no therapeutic advantage in it.

Of the three coal-tar products, phenacetine, antipyrine and antifebrine, the first is the least objectionable in all ways, and is often most useful, not as an antipyretic, though of course it acts so incidentally, but to control excessive nervous irritability, particularly in cases where a mild diarrhea threatens to complicate dentition. In severe diarrheas it should, I think, never be used, for depression will be quite severe enough without it, and water can control the temperature and the nervous symptoms as well.

Antiseptics should *a priori* be most useful, from what we have learned of the bacterial conditions in the alimentary canal. But in practice disappointingly small results are obtained. Foulness of stools is a special indication for their exhibition.

Salol is put first by some. I think it very risky, as nephritis is an ever-present danger in severe cases, and the infantile kidney is peculiarly susceptible to the action of carbolic acid—I have ceased its use altogether.

My favorite is bismuth salicylate, from one-half to three grains according to age. It is sometimes ill-borne and irritating. Others are calomel, bichloride of mercury, biniodide of mercury in one-fiftieth grain doses, usually with potassium iodide. "Of eighty cases, seventy-two cured in two days." (Luff, *Brit. Med. Jour.*, November 16th, 1898, quoted by Blackader, *Sajous' Cyclop. Pract. Med.*, Vol. IV.)

Arsenite of copper, benzonaphthol, menthol and thymol in

one form or another, creosote and carbolic acid are all open to the objection given above; resorcin is very highly spoken of by Fenwick, in three or four grain doses every four hours even to very young infants. I have used it and find it, I think, useful and certainly very readily taken, in syrup and, say, elixir of lactopeptine. Endoxin is one of the new iodine and bismuth preparations, non-toxic; dose, one grain every hour to a child a year old. I have no experience of it in this connection.

As a class antiseptics are depressant to the heart and are of doubtful utility. Plain sterile water in large quantity, ten or twelve ounces a day, will control an acute diarrhea better (and meet other indications besides) by replacing the fuel on which the conflagration in the intestine feeds.

Astringents are theoretically most useful, but practically in the diarrhea of infants are of very little value. They should be preceded by purgation. Bismuth salts come first, and best of these the subgallate, unless one wishes the antiseptic effect of the salicylate. Two to four grains every two hours may be given to a child one year old. Holt declares his preference in the great majority of cases for the subnitrate, but says that at least two drachms a day should be given to a two years old child. Tannic acid, of course, in one form or another, usually a vegetable extract like tinct. of kino, catechu, and so forth, is a very old remedy, but modern practice relegates it to a secondary place. Properly used it is most valuable. The newer forms of it, tannigen and tannalbin do sometimes act very well. Tannigen acted like magic for me this year in doses of three or four grains every four hours in a little white sugar, with a child of ten months which had a persistent chronic diarrhea mainly due to fermentation in the small intestine. The stools were at once reduced from eight to twelve daily, to two. But in acute cases, and indeed in the majority of cases, I think that experience is showing that recovery is not so rapid as when other treatment is adopted. Certainly when severe derangement of secretions exists I have seen tannalbin come through into the bed pan practically unchanged and without effect. As much as forty-five grains a day may be given to young babies, and excellent results are reported, chiefly from the Continent.

Digestives are of great importance, for reasons that it is superfluous to detail. They may be used to predigest the food or be given as medicine. I find lactopeptin either as powder or elixir most useful. Ingluvin, pepsin, pancreatin, etc., are only to be mentioned. As a class they are naturally of more service in chronic than in acute conditions, for in the latter, food is largely withheld as already been.

Opiates.—This class has been purposely left to the last, on account of its great importance. Opium will never lose its value in the treatment of infantile diarrhea, though latterly it is, perhaps, more intelligently used, and one is struck on reading recent literature at the infrequency of any illusion to its use. The best form is, I think, paregoric, for many reasons—palatability, its other constituents, and the fact that it contains opium and not morphine alone. Dover's powder is most useful, but its taste is objectionable. Chlorodyne is too hot, and besides contains not opium, but only morphine, which has more marked constitutional and less local effect on the bowels. Codeine is too mild a narcotic, and in young babies a too decidedly tetanizing agent, as I have seen. Chloral, belladonna, hyoscyamus, and so on, have no place in the treatment of this disease.

The very first rule to lay down about opium is that until a purgative has been given it should not be administered. The next rule is that the dose should not be repeated till the effect of the last one, if full, has passed off. And another, which would seem to lie fairly on the surface and yet is constantly neglected, is that opium should not be given in the same mixture with other medicines, but must be kept by itself and given as occasion requires only.

The chief indication for opium in acute cases is pain. In colitis, with tenesmus and its other characteristics, it is a necessity from the start, and I prefer to give it here in the form of laudanum in a very little, cool, thin, starch paste as an enema, repeated when expelled.

In chronic cases, and especially in cases often seen, in which feeding brings on excessive peristalsis with pain and evacuation of the bowels, it is often quite indispensable. In the latter case I usually order two to ten drops of paregoric half an hour before feeding, according to the age of the child and the length of the interval between feeding. Holt remarks that nothing requires nicer discrimination than the use of opium in diarrhea. Of course even with these little patients caution is needed, and opium must be discontinued as early as possible, for they soon learn to give it up with a bad grace.

Irrigation.—It will not do to close this paper without reference to the use of irrigations. First as to lavage of the stomach. I have never employed it, as the conditions upon which private practice is conducted here practically preclude it, and I cannot help thinking that the great majority of cases we see get along well without it. Intestinal irrigation is quite another matter. It is undoubtedly most valuable, especially at the onset of any acute case, and throughout the course of a colitis or enterocolitis as against the simple catarrhal enteritis.

The cold irrigation is a valuable antipyretic measure, but one to be used with caution, as it may depress before one is aware. The hot irrigation is of value, especially if normal saline solution be used, in cases of great prostration and collapse, and ranks only second to interstitial injections as a stimulative and restorative measure. Irrigations to be effective should be done by a physician, or at least by a trained nurse. Parents cannot usually do it properly. Holt says that they are advisable in all cases, and should be done at once on seeing the child, two or three times the first day and once a day afterwards. As to the medium to be employed, the day of medicated water has passed, and very properly so far as antiseptics are concerned, unless it be boric acid. Sterilized water or normal saline solution is all that is advisable, except in cases of chronic ulcerative colitis where weak astringents, such as tannic acid ten to thirty grains, or extract of witch hazel, two drachms, or nitrate of silver, five grains, to the quart may be of service. Some authorities disapprove of nitrate of silver in all cases and certainly with reason in acute cases. This kind of irrigation should be kept up for fifteen minutes or so each time, and it is sometimes of advantage to follow it by the injection of three or four ounces of a much stronger similar solution which is to be held in for a few minutes by pressing the buttocks together.

In conclusion, Mr. President and gentlemen, speaking in the cold-blooded terms of the Malthusian brotherhood who love political economy, let us remind ourselves that no province of the *Ars Medendi* is so fraught with direct benefit to the State as that which saves to the State the lives of so many little citizens useful *in posse* to the body politic. And who can estimate just what they are *in esse* to the family, or calculate the lessening of human sorrow, the saving of pain to those who are so completely at the mercy of the careless and the ignorant, though they be usually well meaning? If it be true, as Cicero says, that "In no point do men come nearer to the gods than in giving health to their fellowmen," it must be true that this point is overpassed when we can bring help to our little ones who "rule by the right divine of helplessness," as Longfellow says in the "Hanging of the Crane," so redolent, like all his work, of that domesticity which is the crown and flower of the physician's relations with the public, and which attains its fullest growth in the treatment of infantile diseases.

We cannot expect sudden success in our educative efforts, for though Minerva, the goddess of knowledge, sprang full armed from the head of Olympian Jove when Vulcan did a craniotomy upon him with his axe, miracles of knowledge are not nowadays so performed; and if this effort of mine, and the discussion which may follow, accomplish some small share in the task I have outlined, I shall feel amply rewarded.

THE POLITZER AND GRUBER CLINICS.

BY JOHN P. MORTON, M.B., L.R.C.P., HAMILTON.

These two large clinics exist side by side in the immense Vienna General Hospital, and constitute its Ear Department. Although, materially, they are separated by a wall, if viewed medically no division really exists, except in very minor details of examination and treatment. They are exclusively aural clinics, and this fact is mentioned only to contrast them with those of England and Scotland, in which ear, nose and throat work are always combined.

This Vienna centre, undoubtedly, constitutes one of the most important in the world. During the past years, many anatomical aural discoveries have originated there, and one is not surprised at this, after a glance at the large collections of carefully prepared temporal bones. Moreover, in the line of treatment, we all know how Politzer's bag has revolutionized our work. When we remember these facts and also this, that at almost any period of the year, doctors of every nationality are in attendance, we are stimulated to inquire into some of the methods of this centre, whose influence has been and is so widespread.

Simplicity is an outstanding feature of both the instruments and the methods.

We, at this distance, in thinking of these large clinics, are apt to picture many wonderful appliances used; but examination reveals the fact that these are of the simplest character, and might easily be procured by any general practitioner. No electrical apparatus is used, and such quackery as phonographs and the like are not included in their list.

Light.—In the morning sunlight is used, and in the afternoon or evening a gas lamp or an Auer light.

Specula.—Hofrath Gruber always prefers the metal specula, introduced by himself, and modified slightly in shape by Ehrhard. Hofrath Politzer employs those made of caoutchouc, claiming that the contrast between their color and that of the parts examined, aids the surgeon; and, moreover, being softer, are not so apt to produce abrasions. Their diameters in either case range from two to eight mm.

Mirrors.—Both head and hand ones are used, having a diameter of 9 c.m., and a focus of 14 c.m., and each possessing behind the mirror a lens bracket. Electric head lights are not used for this purpose.

Tuning Forks.—These range from $C^{-2} = 32 V^s$, to $C^7 = 16384 V^s$, the one octave being considered sufficient. In some clinics forks through seven octaves are in use. To prevent harmonics, the prongs are weighted, or their lower ends filed thin.

To determine hearing, they use (1) the watch and tuning fork when the diminution is slight. (2) Whispering and ordinary conversation tone when there is marked decrease in hearing. (3) In Politzer's clinic may be seen his own instrument, slightly modified by Hedinger and Merian. It recommends itself by always producing the same tone, which normally should be heard at 15 m., and when it is heard only 1 m. away, the hearing can be definitely expressed as $\frac{1}{15}$. Owing, however, to some inexplicable disproportion between the results obtained by it and the watch, only a relative importance is attached to it. (4) Galton's whistle is sometimes used instead of the very high and very low tuning forks.

Politzerization.—In performing this a soft rubber tip is slipped over the caoutchouc point of the bag, and is inserted into the nostril in nearly a vertical direction. Only hand pressure is used.

Catheterization.—Hard rubber catheters are prepared. Hof, Politzer draws the catheter tip over the salpingo-pharyngeal fold into the Eustachian orifice (Bonnafont's method). Hofrath Gruber turns the point inward and draws it forward until it comes against the nasal septum; he then rotates it outwards through 180 degrees (Löwenberg's method). Kramer's method is rarely employed. For contracted nostrils, smaller and differently curved catheters are used. In cases presenting much difficulty, the method of revolving the instrument to left or right around its long axis often succeeds.

Bougies.—Eustachian bougies are frequently used, silk worm-gut being favored. The results obtained, however, are not very encouraging, especially when the danger of dislocation, by striking the joint between the incus and stapes is considered. The immediate effect of bougieing is tested by auscultation, which will be referred to later. Vapors are conducted into the tympanic cavity, either by Valsalva's method, by Politzer's bag or by means of Kerr's inhaler. Vapor injections, however, are seldom employed.

Diagnosis by Tuning Fork.—Germans and Austrians are naturally diagnosticians. Delicacy in arriving at an exact diagnosis is a much more prominent feature of their work than delicacy in treatment. They delight in the most searching examinations, and the student soon learns, especially in ear troubles, never to trust to one sign, but to apply all known tests and institute a comparative study of results before giving an opinion.

Cerumen.—If the trouble is unilateral, Weber's test will show localization in affected ear; if bilateral, then in the worst ear. Rinne remains positive, except in those cases where the stopping of the ear is nearly complete. These results are reasons

for the great care taken to remove all traces of wax or matter before attempting to diagnose middle ear from nerve troubles.

Middle Ear Catarrh with Secretion.—Weber's test in a great majority of cases shows localization in affected ear, although exceptions are sometimes noticed. With little disturbance of hearing, the Rinne remains positive; whereas, with great diminution in hearing the negative result is obtained; and in the latter cases we also find a lengthening of bone conduction. The Gellé and Bing tests are not, as a rule, applicable; but the very great variations of hearing so characteristic of this affection allow of the application of all the different tests at times. If the Weber test shows any signs of being localized in the good ear, or the Rinne gives any evidence of being positive, syphilis of labyrinth is always carefully examined for, and when this is present the very important symptom of shortening of bone conduction (Schwabach) is distinctly marked.

Catarrhal Adhesive Processes in Middle Ear.—As we all know this process affords us opportunity for perhaps the most delicate work with the tuning fork. If both ears are effected, Weber's test is very indefinite and only of relative value, if unilateral it is localized in affected ear. Rinne always shows negative, and the bone conduction is generally lengthened. Of tuning forks held before ear, low ones are heard poorly, while high ones are heard very well. Such a combination of symptoms would render the diagnosis almost certain. When other tests are confirmatory, and yet Rinne remains indefinite, *i.e.*, the tuning fork is heard as long before the ear as through the bone, then labyrinthine complications must be considered probable. The same suspicion arises when bone conduction is not lengthened or shows slight shortening. Ankylosis of the base of the stapes with the fenestra ovalis frequently presents itself in this affection, and it is just here where Gellé's test, which is so often indefinite, gives positive results, for this test depends on the movability of the stapes. A sounding tuning fork is held to the forehead, the air pressure in the meatus is then raised by means of Siegel's speculum. When the ear is in a normal condition this should lessen the sound of the tuning fork by displacing the stapes inward and rendering it less movable. If ankylosis of this bone is present, no such lessening is obtained, for it cannot be rendered less movable than it is already. In rare cases the malleus and incus are stiffened, while the stapes is comparatively free. Bing's ingenious test will prove this. Through the medium of a Eustachian catheter, an ear trumpet is connected directly with the tympanic cavity; the sound-waves are thus conducted immediately through base of stapes and membrana tympani secundaria to the labyrinthine fluids. Another trumpet is connected with the external meatus. If speech

cannot be heard through the latter source, but can easily be heard when spoken into the tube connected with the catheter, the stapes is then judged to be freely movable and the malleus and incus to be in some way stiffened. Dr. Bing has also instituted a method which aids in differentiating middle ear trouble from nerve trouble. The sounding tuning fork is placed on the mastoid process; as soon as the note ceases, the external meatus is closed with the finger, and if the sound is not again heard, middle ear disease is diagnosed. This method is only applicable to very high grades of disturbance, and is not often employed. If Corradi's test is applied under this heading, the secondary sounds described by him should be experienced. This test is considered yet as *sub judice*.

Otitis Media Suppurativa Acuta.—As one would expect, the Weber is localized in the affected ear. Rinne gives very indefinite results. Perception through the bones, as a rule, remains unaltered, although when the pain is very great, just before perforation of membrana tympani, it sometimes completely disappears.

Otitis Media Suppurativa Chronica.—The bone perception is generally normal. The Weber and Rinne tests are analogous with those found in middle ear catarrh, the Weber being localized in affected ear, and Rinne being markedly negative, except during very early stages, or when labyrinth disease complicates.

Auditory Nerve Disease.—Weber is localized in the normal ear, but is considered of no value whatever unless taken in conjunction with the other tests to be mentioned. When both sides are affected, its results are negative. Very high and very low toned tuning forks are tried before the ear, and good perception for the latter is regarded as strong evidence for labyrinth trouble. On the contrary, good perception for the high notes is considered as of no value, for so many cases of pronounced nerve trouble are experienced in which excellent perception for the highest notes is retained. Rinne's test gives a positive result, and an explanation of this rather puzzling finding may not be out of place. Normally, the perception of the tuning fork through the air is longer than through the bone. In either case the nerve is finally called into action, and when it is diseased, the air and bone conduction must suffer equally, which leaves them in the same relation to each other as in the normal condition, viz., positive Rinne. The important point, then, is not that we have a positive Rinne, for such is found in normal conditions, but that the Rinne is rendered positive by the shortening of the bone conduction. This lessened perception through the bones is the result obtained by applying Schwabach's test. A comparison is instituted between the length of the perception through the mastoid of patient and of the examiner. The

difference is measured in seconds, and the degree of nerve trouble thus arrived at.

Auscultation alone is really of no value, but when taken together with other symptoms may decide the diagnosis. It is performed in either of two ways. When done through the mastoid, and a blowing sound is perceived, Dr. Michael judges that the mastoid cells are filled with air and do not contain any pathological products. When the Eustachian canal is narrowed from any cause, or the membrana tympani perforated, no sound is heard. If these last two conditions may be excluded, and auscultation sounds are still absent, some pathological condition of the mastoid cells is diagnosed. As a rule, however, auscultation is performed directly through the external meatus by means of the interaural tube. With *perforated tympanic membrane* the sound is of a loud, penetrating character, and seems very close to the examiner's ear. The note is high or low, according to the size of the perforation and the patency of the Eustachian tube.

Sclerotic or Atrophic conditions of the middle ear and the tympanic membrane combined with a normal calibre tube give origin to very high, sharp and vibrating sounds, which may easily be mistaken for those produced by a perforated drum. The ear manometer, however, can easily distinguish these conditions.

Secretion in the Eustachian canal and tympanum are known by the râles produced. These originate mostly in the tube, and vary according to the nature of the secretion. When râles are heard, followed by a free blowing sound, the air has been forcing its way through some secretion in the canal, and then has burst freely into the tympanum.

Narrowing of Eustachian Tube produces a high, weak sound, whose chief feature is its seeming distance from the examiner's ear. If the air does not pass the constriction at all, besides being distant and weak, the note is very low and dull.

Space will allow me no liberty to further lengthen this article. On some future occasion I may have the pleasure of continuing it, and dealing with treatment and operations. Permit me to conclude by heartily recommending either the Politzer or Gruber clinic to anyone wishing to engage in special aural work abroad.

Society Reports.

CANADIAN MEDICAL ASSOCIATION.

The thirty-second annual meeting of this Association was held in the theatre of the Normal School building, Toronto, on August 30th, 31st, and September 1st, 1899. Mr. Irving H. Cameron, Toronto, the President of the Association in the chair, and Dr. F. N. G. Starr, acting as General Secretary. The meeting was called to order by the President at 10.30 a.m., and the minutes of the last meeting, at Quebec, were read and adopted. About eighty members were present for the first session, which numbers were swelled to about 275 before the completion of the meeting.

Dr. A. J. Johnson, Toronto, the Chairman of the Committee on Arrangements, submitted his report for the guidance of the members, which, on motion, was received and adopted.

The General Secretary then read telegrams of regret from Dr. J. M. Beausoliel, Montreal, and Dr. E. A. Farrell, Halifax; also from Dr. A. Laphorn Smith, Montreal, stating that he was unable to be present on account of the death of his daughter.

The President informed the meeting that he had already despatched a letter of sympathy to Dr. Smith.

Tuberculosis in Canadian Cattle and Its Prevention.

Dr. J. George Adami (Montreal).

At the outset, he stated that there were three questions to be asked and answered: (1) Is tuberculosis in cattle a source of danger to other cattle, so as to seriously affect their well-being and to be a source of loss to the owners? (2) If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human race? (3) If infectious from animal to man, what are the commonest modes of infection, and as a sequel to this, how are we to diminish the danger?

If the first can be answered in the affirmative, how can the disease be erased? To do this we should employ all the means in our power. What organization and official steps should be taken in our country to stamp it out? In regard to the question: Is it dangerous to other cattle when in cattle, there is abundant evidence to show that the introduction of an infected bull into a herd has been followed in a short time by symptoms of the disease in old members of the herd. We can thoroughly rely upon the tuberculin test. In Germany, they

have come to the conclusion that the amount of tuberculosis is over fifty per cent. of the animals in the land. Stringent regulations should be carried out by the Government. The animal should be seen before permitted to enter Canada. If once an animal has been inoculated with tuberculin, you will not get a secondary reaction until a month has elapsed. What are the results and dangers from this extreme prevalence of the disease elsewhere? First, the effects upon the animal itself, milk, breeding, etc.; sooner or later the disease progresses. Second, there is danger to the community in employing the milk and meat of such an animal. In regard to his second question, If infectious from animal to animal, is it infectious from animal to man? we generally give an affirmative answer to this. The amount of reliable evidence of direct transimission from animal to man is singularly slight. It would be easy to determine this if we could make a direct experiment; but we cannot do that. We cannot inoculate man from the deceased meat. We can do the other, though, *i.e.*, inoculate cattle from the sputum, and we find that they are slightly susceptible to human tubercle. That obtained from man, however, tends to be localized and leads to transient results. Even in butchers and children fed upon the meat and milk of tuberculous cattle, there is lack of positive evidence. In them, we must exclude every other possible mode of infection, and such exclusion is a matter of extreme difficulty. Thus, to obtain any authentic case is a matter of great difficulty. The frequency of tubercle amongst children would appear to be a strong argument in favor of believing that the milk of cows affords the most likely source of infection. The mortality from tubercle in early childhood is not decreasing, and the opinion that the prevalence is due to infection from milk from tuberculous cows seems to be well-founded. In 1890, the testing of cattle was encouraged to the utmost possible extent by the Government. In 90,000 inspected cattle at Montreal in 1894, only eighty were rejected, and only two of these were recognized as suffering from tuberculosis, and even in them the disease was only limited. Pleuro-pneumonia is absolutely non-existent in Canada. Out of 2,000 post mortems at Montreal, there were only fourteen cases in which tubercle were detected in the lungs, *i.e.*, 0.06 per cent. He advocated the appointment of inspectors to kill off or buy and place on Government reserves all infected cattle, and then in a very few years Canada will become practically free from the disease, and become a great centre for the breeding of high-class cattle, and other countries will have to come to us for their stock.

Dr. J. J. McKenzie, Bacteriologist to Ontario Board of Health, spoke of the effect of climate in reducing the amount of

tuberculosis among our cattle, and stated that our climate is favorable for this. The difficulty is that the cattle that ought to have the benefits of the climate, in winter time as well as summer, are shut up and housed in small stables in which every breath of fresh air is kept out, as their owners think more of keeping them warm. As to the presence of tubercle bacilli in the milk, some six years ago, he investigated some twenty-five cattle that reacted to the tuberculin test. He examined the milk of all these cows, using the specimen after passing through the separator, and in only two cases were there any bacilli present, and in these two cases he only found six or eight bacilli in the whole specimen, and in the post mortem afterwards, they were unable to find any tuberculosis in the udders.

Dr. Clarence Starr (Toronto) stated that in the fall of 1897, he had done some experimental work for the Ontario Government along the same line, and it was then the intention of the Minister to introduce the Bangs' system. Statistics taken from cattle for export are not fair. Those are cattle taken from the herd, and free from disease as far as possible. The Dominion Government some time before that referred to, had passed an Order-in-Council recommending that all cattle reacting to the tuberculin test should be slaughtered. That, of course, put a stop to the hunting of statistics, on account of the fact that the farmers would only suppress it if it were in their herds. All cattle imported into this country should have a certificate of freedom from tuberculosis by means of the tuberculin test, given by the breeder, and no cattle should be imported into this country unless such has been done.

Dr. Turnbull (Pennsylvania) said he had listened with a great deal of pleasure to the able paper of Professor Adami, and thoroughly agreed with the writer in making a long period of quarantine for animals imported. In Pennsylvania, recently, a law was enacted (within the past two years), that breeders within the state are not to bring into the state, any animals for dairy or breeding purposes unless they have been tested for tubercle by the health authorities from the state in which they were bought. It was an excellent law; but the law was not stringent enough, in that the breeders had got on to the fact, that if an animal reacts to tuberculin, a period has to elapse before it will react again, and a great many of the breeders are unscrupulous enough to keep injecting their animals with tuberculin. He was in favor of a seven weeks, quarantine period; or longer should be better. Make the quarantine period just as long as you can. It is better for your breeders.

Dr. P. H. Bryce (Toronto), Secretary of the Provincial Board

of Health, spoke of the powers bestowed on health boards by the Ontario Government in 1896, and said that the regulations were practically those of Bangs.

Dr. Roddick (Montreal) said that veterinary surgeons should alone be allowed to use tuberculin upon cattle before they were sold. We have several illustrations in the Island of Montreal, where a farmer is known to have injected his cattle, sold them to a gentleman farmer, and all of those cattle turned out to be tuberculous, reacting later on to the tuberculin test. In some stables there is only 200 feet of air space where there should be 2,000 feet of air space. Then, care is not taken to cleanse the stable as it should be done. He promises, upon some future occasion, to bring the matter up in Parliament, as he wants the Government to take a stronger hand in this matter. He has the promise of the Minister of Agriculture that he will discuss the question of the Bangs' System, and the slaughtering of the animals, in order to eradicate this terrible disease from among our cattle.

Professor Adami, in reply, said in regard to Dr. Mackenzie's interesting experiments, one can find, absolutely, tubercle in the milk and no tuberculosis in the udders; but one does find fibrosis of the glands, but no sign of tubercle in the glands. As to the question of quarantine, the Government of Canada has made regulations to the effect that in cattle imported from England a certificate shall be brought in regard to the tuberculin test with them. The tuberculin test can be employed by those willing to employ it fraudulently. He advocated the adoption of the Bangs' system, and felt assured that in three or four years we can get rid of tuberculosis, at any rate aid it by a more extensive slaughter than in the old country.

The Results Already Achieved at the Gravenhurst Sanitarium.

Dr. J. H. Elliott, Medical Superintendent of that institution, reported on this subject. In his classification of cases when admitted, he had followed the methods of Trudeau: "incipient," "advanced," and "far advanced." On discharge, they are classified as: "apparently cured," "disease arrested," "improved," "stationary," "failed," or "died." "Apparently cured" signifies absolute absence for three months of any expectoration. "Disease arrested," cases in which bacilli are still present, but all constitutional disturbance gone for some time. "Improved," are cases in which there has been some marked improvement in the condition of the lung. The first year's report shows that 116 were admitted during the first year. Of these, 33 remained at the close of the year, 83 having been discharged. There were 12 "apparently cured"; 23 "disease arrested"; 29 "marked improved"; 11 "unimproved"; 5 "failed," and 3 died. The

average stay of each patient was 98 days. Making a selection of 30 patients in three months, 6 being "incipient" cases, 16 "advanced," and 8 "far advanced." Of the 30, 22 gained in weight, 4 lost weight, and 4 neither gained nor lost. One patient in four months gained $41\frac{1}{2}$ lbs. These results were obtained while the sanitarium was undergoing development. The sanitarium year ends on the 30th of September. Taking the first nine months of the year, ending at the 30th of June, of 17 "incipient" cases, 11 were "apparently cured," 6 "improved," or "disease arrested"; none "stationary"; none "failed," and none died. There were three cases of doubtful evidence of phthisis, one was "much improved," and two "apparently cured." The average stay was 152 days. Of the 72 cases discharged, 61 had bacilli when admitted, and 47 had bacilli when discharged. Of the 72 cases, 60, or 83 per cent., gained in weight. One patient gained 18 lbs. in the first month. He drew especial attention to the fact that of 17 "incipient" cases, 11, or 65 per cent., were "apparently cured." With a longer stay 80 per cent. could be got. From 12 to 18 months have elapsed since the discharge of the patients of the first year. Twelve were reported "cured," and in none of these has there been any return of the trouble, and all are in perfect health.

Dr. Powell (Ottawa) asked what important advances have been made by separating cases of phthisis from the general community and putting them under proper conditions, *i.e.*, those cases of incipient phthisis? Then he would like to know, broadly, on what the diagnosis was based, in order to place them in that class? In every case was it based upon the sputum, or to what extent on the clinical symptoms given, in order to say, was the person in the tuberculous state at all?

Dr. N. A. Powell (Toronto) stated that Dr. Stewart (Montreal), and himself, had been responsible for a large proportion of the diagnoses in these cases. The examinations have been checked over by the late Dr. J. E. Graham and Dr. J. L. Davison. Since the death of Dr. Graham, Dr. W. Britton, Toronto, has been appointed on the staff. It was quite proper to place them under treatment before bacilli could be found in the sputum. There must be a breaking down of the lung tissue before you can get the bacilli. Bacteriological examinations are always made, and made repeatedly. He stated that he had to accept the responsibility for there being at the present time a sanitarium at Gravenhurst. There is no desire that there should be any financial return. There are no salaries, excepting to the superintendent.

Dr. Elliott, in reply, stated the tuberculin test has not been used. The rate is \$6.00 per week for all patients. The Ontario Government gives us help to some extent as other hospitals.

We get our share of the \$110,000 grant, the total grant for the year being about \$1,900. Each patient has a separate room ; two patients are not crowded together into one room. There are two double rooms only. All the expectoration is collected either in a box or in a handkerchief and is destroyed by fire. Last year there was a deficit which was not met.

FIRST DAY—AFTERNOON SESSION.

“Christian Science.”

Prof. J. H. Richardson, Toronto University, stated that when it was suggested that he should read a paper on this subject, he willingly consented, not because the subject was worth five minutes' talk, but because we should have a more definite knowledge of it. It received its name in 1876, and was a conglomeration of spiritualism, homeopathy, mesmerism, deceit and avarice. In 1862, Mrs. Eddy, then Mrs. Patterson—she has had four husbands—had been a helpless invalid for six years, though the illness is not stated. She then came under the care of a Doctor Quinbe, who, unlike all medical practitioners, made no outward applications, simply sitting by the patients and talking to them about the disease. This man said : “I change the fluids of his system, and establish the principle of his health.” In that same year Mrs. Eddy met with an accident which brought back her old disease. In 1866 she again received “the treatment,” and her friends were frightened at her being restored to health. Such was the commencement of this so-called “Christian Science.” In the opinion of the essayist Eddypathy was “ridiculous muss.”

President's Address.

Mr. I. H. Cameron first expressed his thanks at the honor conferred on him, and then thanked the members of the Association for their unprecedented attendance at the meeting. “The burden of my lament to-day is the overcrowding of our ranks, and the absence of scholarship in the profession.” To cite an illustration : It was formerly considered that 1,000 souls were enough to keep one doctor alive ; now in the city of Toronto there are over 400 doctors to a population of 200,000, and other cities will reveal like conditions. There is no profession that tries to be more honest. There are those who should not be in the profession at all, being better fitted for other walks of life. One told him that he just wanted money, and that he did not care anything about the profession. Another fault is, no doubt, the growth of specialism. He deplored the fact that the old-fashioned practitioner is dying out, the decadence of the doctor's horse and the introduction of the automobile. Defect

in scholarship and manners came in for notice; the pupil no longer meets his master with terms of respect, but on terms of equality. He quoted Mitchell Banks again in regard to lack of scholarship. There was eternal cramming and loss of power of thinking. What is the remedy? Stiffen up entrance examinations. We should have this rough sieve at the very beginning. It was a great mistake to allow inferior men to enter upon a course of studies, as after matriculation they usually got through somehow, even though they took separate subjects for a period of ten years. He outlined the course of studies according to his light, and stated that the course should conclude with three years' clinical experience. The diminution of the ranks of the Association by the departure to the silent majority of Drs. J. E. Graham, Toronto; H. P. Wright, Ottawa; and J. H. Mullin, Hamilton, was feelingly referred to. In concluding his admirable address, he referred to the high honor conferred on the profession of medicine, when Her Majesty bestowed the honor of knighthood upon three members of the profession in England, Burdon Sanderson, Michael Foster, and Mitchell Banks.

An Experience with Formaldehyde Disinfection.

Dr. F. Montizambert, Director-General of Public Health, Ottawa, related an experience with the employment of this disinfectant in an outbreak of small-pox on board the steamship *Lake Huron*, twenty-five days out from port on the Black Sea, with 2,400 Doukhobors on board. Formaldehyde in solution was used for the saloons and staterooms, and in all parts where the fittings would be destroyed by steam. Steam is not suitable for large rooms, as the temperature cannot be kept up. Formaldehyde, therefore, was used on this occasion, and the total measurement of surface on which it was employed was 200,000 feet odd. Twelve ounces of this solution was allowed for each 1,000 cubic feet of space. Two new sets of men paraded, occupied, lived and slept in the vessel from two to four days after seventeen cases of small-pox had been removed, and there were 2,400 people on board. That was a severe test. He was happy to be able to state that there has not been reported a subsequent case of the disease during two and one-half months that have since elapsed.

Massage and the Relief of Eye Strain in the Treatment of Glaucoma.

Dr. George M. Gould (Philadelphia) stated that glaucoma will first come into the hands of the general practitioner for treatment. Four years ago he wrote concerning glaucoma, that massage properly applied would seem to be a good process.

stimulating and arousing normal functions generally. During the last four years he has tried the same plan in a number of cases, and then proceeded to relate his experience and results. In the first case there were typical symptoms of glaucoma, with the exception of pain. Tension, right plus, 1; left plus, 2. Massage was employed, and for three years the eyes have remained normal. In the second case, massage also was performed, and the vision remains perfect, and the tension perfectly normal, now, for three years. By this treatment all venous and lymph spaces with stasis, are cleared and broken. Massage may be of great service, especially if seen early. In many cases it may prevent enucleation, and in sub-acute attacks it is invaluable, and is promptly prophylactic as well as therapeutic.

Dr. R. A. Reeve said that glaucoma is such an insidious and dangerous disease that one hails with pleasure any new treatment or anything looking towards prophylaxis. Taxis exerts beneficial results in this disease, and, fortunately, it is a very rare disease. He congratulated Dr. Gould upon the wisdom he displayed in laying such great stress on the scientific correction of errors of refraction.

Treatment of Acute Digestive Disorders of Infancy.

Dr. A. R. Gordon (Toronto). We should begin our treatment with the suspension of all the regular articles of diet and the employment of substitutes, and if the attack is in the stomach, the reason for this is all the more pronounced. Withholding of foods must be absolute, from eight to ten, or twelve, or even twenty-four hours, with the administration of water alone. In the simpler forms suppression of food may be all that is necessary for a few hours. After this, rice water, etc., may be used. Liquid peptonoids he has found very satisfactory. It may be necessary to persist in the use of this diet for days, until all the symptoms have disappeared, and the child is practically convalescent. Cow's milk should be the very last to be allowed. Some of the malted foods answer very well at first. When milk is to be allowed, it is safer to peptonize it, although sterilized milk is sometimes more easily borne. Purgation and repeated purgation is indicated at the commencement of an attack. Calomel is the best drug to employ with soda bicarb. to prevent griping, in divided doses when vomiting is troublesome. Castor oil is safe and effectual and soothing. If vomited, a second dose ought to be administered at once; a child rarely vomits the second dose. During convalescence the aromatic syrup of rhubarb or the phosphate of soda is satisfactory. Daily purging should be continued with these remedies until the temperature falls to normal or nearly so, and until the offensiveness of the discharge ceases. Initial doses of calomel and

castor oil have the effect of bringing away matter which has been lodged in some crypt or recess of the bowel. We may feel safe when we see the characteristic calomel stool. In regard to flushing, warm water with sufficient salt added should be employed, and if vomiting be present, that is no contra-indication. It serves for the purpose of lavage, and should be used except in the continued vomiting of acute gastritis. Water and normal saline solution per rectum is even more important, and should be used in all cases. The quantity should be large, and used three or four times daily, and the temperature of the water should be about the normal body temperature. As to sedatives, they are local and general. Bismuth and opium, the former used in large doses; two drs. in twenty-four hours are the best. Opium should be used to allay excitement, to remove pain, and to control peristalsis; but it is unfortunate if it is required before the bowel is cleansed. While the temperature remains high, its use should be restricted. It should be used separately, and is contra-indicated in cases where there is any cerebral excitement. Dr. Gordon said he was skeptical of antiseptics. The extent of surface and the poison to be neutralized is great; but after the affected surface is cleansed, they may then prevent putrefaction and irritation of the membrane. If used, they should be given in the food or after it. Asepsis should be secured to prevent decomposition. In the administration of antiseptics in the late stages, much benefit may be had from them, especially HCl. Astringents should never be used.

Dr. Benedict (Buffalo) said that he was very skeptical of such remedies as antiseptics. If the bowel is full of fecal contents, it is a difficult matter to ascertain whether they are any good or not; but following the purgation after the fecal mass has passed through the bowel antiseptics can be used, and then you will find them valuable.

Dr. Holmes (Chatham, Ont.) spoke of hydrotherapy, putting the child in the cold bath. Remember, it is through some error in diet that the child begins to vomit; the bowels move frequently; sunken eyes and depressed fontanelle can be observed. The condition of that child will be that its hands and feet are cold and blue, and if the temperature be taken in the rectum you will find it 103 to 106 degrees. You can reduce this temperature by the cold bath and then administer the calomel and the castor oil, and that may be all the treatment necessary.

Dr. Gordon, in reply, said that small doses of paregoric are of great benefit, still one should be very guarded in the use of opium in these cases. In regard to the cold bath, he states that he invariably resorts to the use of the cold sponging and lumps of ice to the spine.

A Case of Subcutaneous Emphysema.

Dr. Fred Fenton (Toronto) exhibited a specimen of tubercle in the lung of a child six months old. The child was described to him as having been well until it had reached the age of five months, except for an attack of bronchitis at the third month. On December 23rd last, five days before death, the baby was very restless, but there was no cough to any degree; in fact, it was not a marked feature at any time. Swelling was noticed in the greater part of the neck, chest and shoulders, passing upwards over the head so that you could see a large projection over the vertex, and then spread downwards over the chest and abdomen. It was limited to the neck behind. Over the parotid region it advanced upwards, spreading forwards over the cheeks. Passing down the chest-wall in front, it became limited at the lower border of the pectoral majors. It passed forwards and backwards to the spine, and downwards to the crest of the ilium and over the inner half of Poupart's ligaments it escaped. It also spread down the arms to about half-way to the elbow. Microscopic examination of the tissues determined tubercle bacilli in the lungs, a few in the liver and spleen and none in the kidneys. The father, a man of fifty, has suffered from winter cough for years, because of chronic bronchitis. No direct evidence of tuberculosis was obtained in the mother, but she is poorly nourished and looks a fit subject for the disease. The production of emphysema is usually ascribed to prolonged and violent coughing; but this was never a feature of the case. The question of infection arises, and the history of the whole case points very strongly to such an origin. The presence of tubercle bacilli in the father's sputum is quite ample to account for the child's infection.

Iritis.—The Successful Treatment of Three Important Cases by the Combined Form of Treatment.

Dr. G. H. Burnham (Toronto) spoke of the different forms of iritis with paralysis of the third nerve from specific disease, and the great value of the combined form of treatment. These cases often led to total destruction of vision in the eye, and he used this treatment for the sole purpose of putting a stop to relapses. Several cases were cited and then the doctor detailed his plan of treatment. Pilocarpine was given hypodermically, the dose being one-tenth to one-fourth of a grain at each injection. This is administered in a series of sittings of from ten to fourteen injections, given once a day as a rule. The interval between the series ranges from three to eight weeks, during which time the patient is taking the iodide of potash and the bichloride of mercury internally. Then another series

of injections is begun. Before each injection the patient is prepared in a room with a temperature of seventy-five degrees, lying between flannel blankets, and lies on the left or right side, as convenient. If he feels chilly and uneasy, the effect is lessened. In winter, Dr. Burnham uses a hot water bottle to the feet. The proper effect of the injection is shown by the perspiration and a free flow of saliva, the latter varying from six ounces to a pint. At the end of an hour the patient gets up and dresses. Two hours afterwards he can take his food. The injection is usually given about two hours after the mid-day meal. The iodide and mercury must be given regularly between the series. As to the length of time consumed in this treatment, in some a few months will suffice; in others it is continued for three or four years, and no relapses occur in this treatment.

Best Method of Dealing with the Consumptive Poor.

Dr. E. J. Barriek (Toronto) spoke first on the establishment and maintenance of rural sanatoria in connection with the municipality or with a group of municipalities. Then the erection and maintenance, in connection with the above, of suitable buildings for the reception and treatment of such advanced cases of the disease as are unsuitable for treatment, was contended for; and, lastly, the co-operation of the Dominion Government, provincial legislatures municipalities, and philanthropic and charitable individuals in providing funds therefor, should be secured.

Dr. Britton (Toronto) thought that a great many of the hospitals of the province should receive and care for these patients in a proper manner. It would be much better if the hospitals did this work instead of building sanatoria for these advanced cases.

SECOND DAY—MORNING SESSION.

Skin Clinic at St. Michael's Hospital.

The skin clinic at St. Michael's Hospital was an important feature of the meeting. There were about thirty cases shown, and amongst them were several rare skin diseases, such as dermatitis herpetiformis, larva migrans, urticaria pigmentosa, hydrocystoma, hydradenitis, favus, molluscum contagiosum, exfoliative dermatitis following psoriasis. Drs. A. R. Robinson, New York; Shepherd, Montreal; Graham Chambers and A. McPhedran, Toronto, took part in the discussion.

Erysipelas, with Treatment by Marmoreck's Serum.

Dr. A. de Martigny (Montreal).

In opening this paper, Dr. de Martigny said that he had occasion to try, during the last fourteen or fifteen months, this treat-

ment in cases of erysipelas of the face, and the result was very good, as a rule; but the result, also, is generally very good by the ordinary treatment. One case in particular was noted, in which for four or five days tonic treatment with iron and quinine had been tried, and a thirty per cent. solution of ichthyol applied to the face, without any good result. The temperature was 105° and the pulse 148, the patient very weak and the face very much swollen. There was also very much suffering from headache, trembling and fainting fits all the time; 20 c.c. of the antitoxin (Marmoreck's serum) were injected. She was then put to bed and a solution of bichloride, 1:4000 applied to the face. On the next morning the temperature was normal and the pulse 96, and the pulse was normal on the following days. In five days she could go back to work, though the face was still darkened in some places. He believes this treatment is more powerful in its curative power than the local applications. If we use the treatment as soon as we do for diphtheria, *i.e.*, on the first day, we would get as good results as from antitoxin in diphtheria. This is not a very severe affection, but we sometimes see deaths occurring from erysipelas of the face. Some friends in Montreal stated that we had two cases of death. In the first case, not reduced by the ordinary treatment, it would not have been cured by that treatment as quickly as if the old treatment had been continued. He was satisfied with the results, and asked the members of the Association to try this treatment when they had a case of erysipelas of the face, and report at the next meeting of the Association, twelve months hence.

Dr. R. W. Powell (Ottawa) asked the writer of the paper about the dose of this particular serum, whether 20 c.c. was the standard dose or whether the dose is altered by the severity of the case, or by the age of the patient, or what rules there are about this treatment.

Mr. Cameron confirmed Dr. de Martigny's findings. He had employed the treatment lately in four or five cases of erysipelas of the face with very prompt results. One patient, in particular, had seven attacks or relapses in fourteen months, and since using this serum injection, no relapses have occurred.

Sir James Grant (Ottawa) stated that when this society was organized thirty-two years ago, this subject was not even in its infancy. Since then great advances have been made, and the observations which have fallen from this gentleman upon this treatment is one of vast importance and such is the efficacy of the injection, in curtailing or destroying the poisonous condition of the system that produced the erysipelas, that it was almost positive in its character. He trusted that Dr. de Martigny would continue in his observations, and throw more light upon the subject.

Dr. Irwin (Weston, Ontario) believed in serum-therapy, but it will not cure all cases.

Dr. de Martigny, in reply, said you can use 10 or 20 c.c.; but we must know that the streptococci are not all of the same kind. There are different families of the streptococcus. It acts on a special family very powerfully. If of the same nature, we can use very small doses with good results; but the serum is prepared from one family, and thus we must use large doses to have any good effects. Besides that, we must be sure when we employ serum that we use a very powerful one. If we find the streptococcus in the beginning, we find the enemy itself. If we wait too long, then we come in too late, and then, if we kill the microbe, we have no reason to hope to have any effect upon the toxine itself, only that it must be eliminated by the natural ways—the kidneys, skin, etc.

Complications and Treatment of Fracture of the Skull.

Dr. J. H. Elder (Montreal) read this paper and stated that it referred to fractures at the base. This last summer he had under his care in the Montreal General Hospital, a remarkable series of these fractures, no fewer than seven all told, five of them being there at the same time. The history of one case: M. S., aged eight years, came into the hospital on 30th May last, unconscious, the result of a fall of fifteen feet, striking on the head. There was a large hematoma about the parietal bone and a depressed fracture above the left ear; pupils widely dilated; blood issuing from nose and ears, pulse weak, respiration shallow. Vomiting of bright, red blood in small quantities. Examination of the throat with mirror showed the blood dropping down from the pharynx. There was a fracture through the middle fossa of the skull, involving both ear and nasal fossæ. Something had to be done at once. He quoted Shepherd's case, where he ligated the common carotid artery. He then ligated the left common carotid artery in this case and put the patient to bed. She regained consciousness on the third day and the temperature kept fairly good, but on the twelfth day, she developed thrombosis in the superior longitudinal sinus, with œdema along the forehead. On the sixteenth day another rise of temperature and thrombosis of the left cavernous sinus, followed in a day or two by thrombosis of the right cavernous sinus. She left the hospital perfectly well in twenty-six days, and continues well. The other six cases are pretty much of the same nature. In all the cases the following general plan of treatment was followed out: First, absolute rest in bed; secondly, quiet was enjoined, and the patient should be kept preferably in a dark room; thirdly, the ice pack was kept to the head continually; and, fourthly, the ears were thoroughly syringed out and packed

with sterilized gauze. The nose was sprayed every four hours with following solution: baborate of soda and sod. bicarb., of each 3 grains; glycerine and water 1 ounce. The mouth was cleansed every two hours with solution of 45 grs. chlorate of potash, 20 minims HCl., 4 drs. glycerine in 10 ounces of water. Food was given per rectum for several days. Peptonized beef and brandy was well borne, when given in this way. Opium is indicated if the patient is violent. It quiets him. Above all, keep the patient free from all excitement, whether of sight, sound or mental production. Exclude the pettifogging lawyer, who is so anxious to have the case.

Dr. Lett (Guelph, Ont.) asked how long it was from the time the common carotid artery was tied before symptoms occurred; because it strikes him that in many of these cases of injury to the skull, that the injury itself, while it leaves no symptoms for a short time from the result of healing, the impinging of the membranes on the cortical substance, that years after the patient will get mental troubles, whereas there are no mental troubles during the acute stages of the injury; and he would like to know if it was a short time or a considerable interval that elapsed before the mental symptoms appeared?

Dr. Harrison (Selkirk, Ont.) stated that he was going to ask the same question that Dr. Lett asked. He has seen cases in which injury of the bones of the skull occurred and there was no ligation of the carotid artery and in which there was perfect restoration to health; but, over a year afterwards, these symptoms supervened.

Mr. Cameron has tied the common carotid artery on both sides, and no mental symptoms followed. The mental symptoms are due probably to the traumatism.

Dr. Shepherd (Montreal) stated that his case, which Dr. Elder referred to, was a case of ordinary hemorrhage, which came on after the accident, with gradual loss of consciousness, and then he operated and found a large clot at the base of the skull. The hemorrhage was so profuse that he tied the common carotid immediately. There were no mental symptoms afterwards in this case.

Dr. Elder stated that he understood that Dr. Shepherd's case had developed mental symptoms just very recently.

Dr. Atherton (Fredericton, N.B.) stated that he had the good fortune to see the carotid artery tied on a medical man of St. John, N.B., and no mental symptoms followed, and if any of the gentlemen present heard this doctor speak on a medical or political topic, he would conclude that his mental faculties were all right.

Dr. Bell (Montreal) spoke of this modern view of treating

these cases, and thought that certainly many cases can be relieved by prompt interference, and such treatment as in other cases prevents sepsis. With regard to the later consequences, we cannot do much to avert these at all. These are produced at the time of the fracture, and he cannot see that we can really do anything to avert these. Do not let the patient die of hemorrhage nor of sepsis. The great point is to know when to interfere and to interfere promptly.

Dr. Elder, in reply, said in regard to the question of mental symptoms, he possibly might be in error about Dr. Shepherd's case, although he had heard that Dr. Shepherd's patient had gone insane. His own opinion is that it is not likely to lead to any bad results. In children we may reasonably hope for better results. In regard to the mental symptoms following fracture, that they do supervene there is not much doubt. Adhesions form between the meninges of the brain and will lead to convulsions and to paralytic seizures. Some of these symptoms supervene two years after the injury; and it is our duty to watch and see if there is any connection between the two. The reason the left carotid was taken was because the injury was on the left side.

Observations on Adenoids and Enlarged Tonsils and their Removal, with Notes.

Dr. D. J. Gibb Wishart (Toronto) said that the cases occurred in the service of the Hospital for Sick Children and thought that few practitioners have a due conception of the enlargements of these lymphoid tissues. The cases occurred in the years from 1896 to 1899, and the total number of cases operated upon was one hundred and three. Of these, forty-seven were males, and fifty-six females. The faucial tonsils alone were enlarged in sixteen females, adenoids in fourteen females. Twenty-four per cent. were under five years of age; twenty-four per cent. were over ten years, and fifty-two per cent. between five and ten years. He examined some of these some years after the operations; but in only sixteen cases could he get an examination, and only four of these showed any return of the disease. There were five cases that had been previously operated on by other operators; then there were two deaths, both due and traceable to the anesthetic. These figures emphasize the fact that the disease is very prevalent. As adenoids are concealed from view, they very often escape notice. In the diagnosis of these, he found the facial expression most useful; the nose is flattened between the eyes. If the nose is well-formed and adenoids are present, the obstruction is only partial. The presence of the open mouth or the constant keeping of the lips slightly apart, when the child is in repose, is also important. In the examination of the

pharynx, the soft palate often presents the appearance of paresis, as if pressure were on the upper surface. Actual sight, however, is the best means of diagnosis. If you fail after the first time with the mirror it is useless to try again, because the child is frightened and force employed means that hereafter you cannot get its consent. Never hurt the child if at all possible. Don't use the bivalve speculum; the trained eye may be assisted by the use of a long angular probe; enlargement of the faucial tonsil is, as a rule, easily seen. The tongue should be depressed in such a way as to prevent gagging, and it can be only brought into view when the tongue is deeply depressed. A good transmitted light should be employed. When enlargement of one or other of the glands exist, it is generally wise to attempt to reduce the condition by astringent sprays and tonic treatment. Every case requires careful consideration of all details. Don't advocate that every tonsil be removed by the knife if it protrude beyond the faucial pillars. When an operation is deemed needful, it should certainly be performed under anesthesia, and the anesthesia should be sufficiently profound to permit examination. In the simple cases, he has used nitrous oxide; but the time limit is too short as a rule—forty to fifty seconds—to secure thorough work. With regard to the position of the patient, the head should be allowed to fall over the end of the table after the tonsils are removed, and then the adenoids taken out. Severe hemorrhage following operation has been reported; but in cases of my own no such hemorrhage gave rise to any alarming symptoms. We might, however, meet with this at any time, because we do not know when an artery may be misplaced; in most cases, however, the loss of blood is very considerable. Out of the total number operated on, two resulted fatally; but in neither of these could the death be due to the operation. In eighty-five per cent. of the cases, no subsequent history has been obtained, so the percentage of cures would be over ninety. As a rule when a cure has not been obtained, the Doctor feels convinced that there must have been some defect in the operation. He removes the left tonsil better than the right; and a small portion of the adenoid enlargement may easily escape attention. The healing process will be slow, and in most which remain will continue large and take on new growth. The use of the spray to cleanse the parts should always be insisted on. The tonic effect upon the patient, the results of operation are always striking.

Dr. Snider (Brussels, Ont.) asked whether the administration of an anesthetic was more dangerous in these operations for the removal of tonsils and adenoids than in other cases.

Dr. Wishart—One has difficulty in knowing beforehand how long a time it will take to remove the adenoids, and they may prove troublesome; and then, again, they may come out in one

entire mass. The forty-five or fifty seconds which the gas gives you will be amply sufficient for the work ; but if for any reason you are not satisfied with the thoroughness of your operation, you are put in the position that the patient is bleeding and out of the anesthetic, and you don't get as good results. With regard to the danger of the anæsthetic, of course it is certainly true that a patient suffering from these takes the anesthetic badly ; but that is not a sufficient reason to prevent one using the anesthetic, if you are thereby going to secure a much more thorough operation. So far as the effects upon the patient who died under chloroform are concerned, it did not seem to be in any way due to the operation. The patient had taken it on two or three other occasions, but in this case the patient collapsed.

Dr. Ernest Hall (Toronto) spoke of the change in the mentality of these patients after operations.

Sir William Hingston—With regard to adenoids, it occurs to him that as soon as we recognise these growths, we should operate on them as soon as possible for their removal. There is nothing to be gained by waiting ; but in the case of the tonsils it is entirely different. Some operate there altogether too frequently. He stated he had seen whole families with enlarged tonsils, and when they grew older they came down to their normal condition. He has seen the tonsils almost meeting, and yet has hesitated to remove them. He took exception to the use of the spray after the operation, and would ask what can be gained by the use of the spray. The membrane of the nose is unaccustomed to it. For years he has not used water, medicated in any shape, to get at the nasal cavities ; instead, he uses powders. He considered the employment of the nitrous oxide gas in these cases useless as there was insufficient time for the operation. He is most favorable to chloroform, and does not think it is more dangerous than in any other case. We have got to see that the blood does not get down into the breathing apparatus.

Dr. Wishart said that he did not mean to infer that the tonsils should be removed in every case ; it is simply a matter of judgment how far they are interfering with the breathing. With regard to Dr. Hall's remarks, with reference to the clearing up of the mental condition, every surgeon knows that there is always a marked improvement after these operations, especially after adenoids have been removed.

Tuberculosis and Insurance.

Dr. John Hunter (Toronto) discussed the effects of family history of tuberculosis and its bearing upon applicants for life insurance. Of course there can be no two opinions about it,

that it is the first and imperative duty of the physician to make an honest examination of the applicant for the medical director of the insurance company; it is due the applicant as well that he should receive the benefit of the advanced medical knowledge of the day. The purport of the paper was to invite discussion that might be used to define more clearly where we are at with reference to the relationship between tuberculosis and insurance. The direct transmission of the tubercule through parental channels is of very rare occurrence. He quoted Dr. Bryce, who had made the statement that 80 per cent. of all deaths from tuberculosis occurred amongst working classes, or in those working at trades.

Dr. Benedict (Buffalo) thought that the heredity of tuberculosis was very much like the heredity of scarlet fever; that it was a question rather of infection, but with a longer period of incubation.

Sir William Hingston thought that the idea of heredity had done an enormous evil to society. For instance, a beautiful young girl is about to be married, a whisper goes round that the disease may be transmitted—the marriage is cancelled thereby.

Sir James Grant advocated the formation of a National Society like that promulgated by Sir William Broadbent in England, and presided over by H.R.H. the Prince of Wales.

Dr. Bryce thought that if this Association could form a society to assist the Government of the country, it would be accomplishing much. The Government of Ontario ought to have inspectors in the various institutions of our country, in order to see if there is a solitary case of tuberculosis, either among the teachers or students, and have such individual removed. Another point in regard to the sale of milk—licenses ought not to be granted to milk dealers until their cattle and premises have been thoroughly inspected.

Cyst of Broad Ligament.

Dr. Chas. Smith (Orangeville) reported this case, and described the difficulties encountered in the removal of the tumor. At the time of the operation the woman was 53 years of age, and the mother of nine children. She had been growing in girth for some years, but thought that she was getting fat only. Increasing dyspnoea, however, soon rendered her life intolerable; then she decided to have the operation performed. The appearance of the growth was a bluish vascular-looking tumor. There was no secondary growth. An incision five inches in length was used, and even then there was a considerable difficulty in performing the operation properly. An uninterrupted recovery took place, and the patient enjoyed good health until her death from apoplexy, five years subsequently.

*SECOND DAY—AFTERNOON SESSION.***Implantation of the Ureters in the Rectum in a Case of Exstrophy of the Bladder, with Patient.**

Dr. George A. Peters (Toronto) exhibited the patient, and fully described the two operations he had performed on this subject. In addition to the exstrophy of the bladder, the patient had also had procidentia recti, and was therefore a great trouble and source of annoyance, disgust and loathing to his friends. In this case he has removed the exstrophy of the bladder altogether. The scrotum is present, and the testicles are descended. The condition is a congenital one, and due to defective development in the urogenital parts. At the age of two and a half years the boy first came under the doctor's notice; he is now four and a half years. All the organs and limbs were perfectly formed with this exception. On the broad, flattened and shortened penis, a groove descended down to the extremity thereof, the under skin of the urethra being exposed, and also the mucous membrane of the posterior wall of the bladder. A rudimentary prostate could be seen, and at the lower part of the bladder wall the openings of the ureters could be detected. Around these there were excrescences, mucous in character. The surrounding skin showed very little irritation, though it was constantly bathed in the escaping urine, though the escape of urine was not constant. When the surface was dried it would remain dry for fifteen seconds to one minute. A fine probe inserted into these openings of the ureters passed almost directly backwards. Both kidneys were somewhat prolapsed, as could readily be determined under chloroform. Generally speaking, in these cases the testicles have not descended. There was an entire absence of the pubic symphysis. With the finger in the rectum one can draw forward and easily detect that there is no symphysis pubis whatever. A description of the operation for the exstrophy of the bladder followed. The operation was done extra-peritoneally, and this operation would seem to hold out hopes, but the mortality is high. The ureters were fixed into each side of the rectum, and almost immediately the rectum manifested a tolerance for the urinary secretion. In forty-eight hours after the operation the bowels moved, and after that the child got along without any difficulty. It is now five weeks since the operation was done, and the bladder has all gone. Now his urine is passed into the rectum and almost immediately it manifested a tolerance for the urine. He can go from two to three hours. That day he had gone from 8 a.m., then at 11 a.m., and again at 2.30 p.m., and at night he will go from four to five hours without passing anything from the bowel at all.

Mr. Cameron thought that this operation was bound to become the operation of the future. He instanced a case in which he had done this operation for a woman, in whom it had existed for nineteen years. A good many of these operations have all proved failures.

Dr. Bell (Montreal) congratulated Dr. Peters upon the result of this case. He considered it a surgical triumph. The operation for the replantation of the ureters has been done for a good many things; and the question of the tolerance of the urine in the rectum is still a much discussed question. The results shown in this operation are good.

Dr. Shepherd thought that the operation was an ideal one, and congratulated Dr. Peters upon the great success he has obtained in this case.

Dr. Peters, in reply: There is one point we must not lose sight of, that there is danger of death from ascending pyelonephritis. When the operation has been done in animals, that has been the cause of death. When contraction occurred the ureter in the rectum would have a papilla. If we have a papilla projecting into the rectum it minimizes the danger.

Co-operation of Surgeon and Physician in Abdominal Cases.

Dr. A. L. Benedict (Buffalo), in a very interesting paper discussed this question. He instanced cases where the two should co-operate, such as in cancer of the cardia, etc., and then proceeded to discuss the diagnosis of these tumors. He thought that very often the patient would benefit if, after an operation, he was handed over to the medical attendant for care and attention.

Sir William Hingston deprecated cutting into the abdomen before a diagnosis had been arrived at.

Gall-Bladder Surgery.

Dr. J. F. W. Ross read a highly interesting and instructive paper on this subject. He exhibited a cabinet of gall-stones taken from patients on whom he had operated, and also a mucous fistula in a gall-bladder specimen. He dwelt upon the difficulty often encountered in extracting these stones from the common duct, and exhibited an instrument he had devised for this purpose.

Dr. Holmes and Professor Bell discussed the paper.

Address in Surgery.

Dr. W. B. Coley (New York) delivered a classical and scholarly address on the radical operation for the cure of hernia. He traced the rise and progress of the operation from

the earliest times, apportioning, as he proceeded, the credit for any improvements. Coming down to modern times, within the last decade, he spoke of the different operations of Bassini, Mitchell Banks, Kocher and Halsted, and concluded with a special reference to the operation for femoral hernia, and a word or two about umbilical hernia, which generally did not require operative measures for its cure.

Vote of Thanks.

Moved by Dr. Shepherd (Montreal), and seconded by Dr. Peters (Toronto), that this Association extend its thanks to Dr. Coley for his admirable address. Carried unanimously.

THIRD DAY—MORNING SESSION.

Anesthesia by Chloroform and Ether.

Dr. W. B. Jones (Rochester) contributed a very interesting paper on this subject. We should know the total solids excreted in the twenty-four hours. Heart-murmurs make no difference. The condition of the muscles and the arteries is more important, and whether filled with good blood. Any adhesions in the lungs should be ascertained. The hypodermic syringe, loaded with a solution, should always be at hand. The administrator should be thorough master of himself, and permit no interference on the part of the operator. He should pay particular attention to the work he is doing, and have no regard to the procedure of the operation, except to know the time necessary to be consumed therein. About eight drops per minute is the proper dose to keep up the anesthesia. He has seen four drops per minute maintain anesthesia for half an hour. He should be ever on the *qui vive* for emergencies.

Some Observations on the Treatment of Cancer.

Dr. A. R. Robinson (New York) spoke of the epitheliomata which could be better treated with a paste than with the knife, as, for instance, those situated around the nose and face and on the scalp—in parts where it was impossible to make a deep incision if the knife were used. The paste employed was an arsenical acid one, with equal parts of gum acacia, made of the consistency of butter. This paste should be applied, and left on from sixteen to eighteen hours before you could get the right effect. From this you will get a complete necrosis *en masse*, with a resulting inflammatory process, which, however, is limited and simple. Then you will get healing by the process of granulation.

Dr. Shepherd thinks that in the majority of cases the knife should be used, with the exceptions as stated by Dr. Robinson.

Dominion Registration.

Dr. Roddick introduced this question in a speech of some length and power. He traced the rise of the agitation from Confederation, and proceeded to outline the scheme for a Dominion Medical Council. Each province was to have three representatives on the central board—one nominated by the Governor-in-Council, one by each provincial Medical Council, and the third was to be the president of each provincial Medical Council *ex-officio*. Any practitioner in good standing, who had been a licentiate for ten years, could at any time go before this central body and receive a license to practise in any province of the Dominion; and no practitioner could do this until such ten years had elapsed. The present provincial councils were to remain as they are.

Dr. Williams (Ingersoll, Ont.), representing the Ontario Medical Council, then took the platform, and moved the following resolution:

"Whereas, the standards of education for the profession of medicine and surgery, and the qualifications for the practice of the profession, vary in each of the provinces of Canada, and the assimilation of these standards, and, if practicable, the establishment of uniform standards throughout the Dominion are desirable; and

"Whereas, in consequence of the provisions of the Acts of the United Kingdom of Great Britain and Ireland, known as the 'Medical Acts,' medical and surgical practitioners, who are by the law of a province of Canada entitled to practise the profession in such province, cannot obtain the benefits of registration under the said Acts, inasmuch as by the said provisions, the qualifications required for such registration must be regulated by the Parliament of Canada; and

"Whereas, medical and surgical practitioners, duly registered according to the law of one province of Canada, cannot legally practise in another province without being duly registered in such other province; and

"Whereas, serious practical inconveniences both to the public and to medical and surgical practitioners have arisen from the above cause; and

"Whereas, it is desirable to assimilate, and, if possible, to unify the various standards of qualifications established by the several provinces of Canada as conditions of admission to the study of the profession and to the practice thereof, such assimilation and unification being best attained by the establishment of some central authority with power to hold examinations of, and to establish and maintain a system of medical registration of, such persons as desire to practise the profession in more than one province of Canada; and

" *Whereas*, it is not within the legislative jurisdiction of the provinces of Canada to establish such central authority, the jurisdiction of such province being restricted to the limits of the province and to provincial objects only ; and

" *Whereas*, it is expedient to constitute a corporation in which the legislatures of the various provinces may, if they see fit so to do, vest such powers as are necessary to effect the above purposes, and the other purposes mentioned in this Act ; and

" *Whereas*, the appointment of such an authority is for the general benefit of Canada, and would promote the advancement of medicine and surgery throughout the Dominion of Canada ; therefore be it

" *Resolved* that this Association heartily approves of the proposed scheme which the committee has formulated and presented at this meeting ; and further resolved, that Dr. Roddick be empowered and requested to continue his efforts to have the scheme completed and carried into effect by such legislation as may be found necessary."

Dr. McNeill (Prince Edward Island) seconded the motion of Dr. Williams, and stated that the movement had his hearty support.

Sir James Grant, Sir William Hingston, Dr. N. A. Powell (Toronto), Dr. Powell (Ottawa), Dr. Harrison (Selkirk, Ont.), and Dr. Lafferty (Calgary, N.W.T.) spoke to the resolution.

It was then put to the meeting and carried unanimously, amid great enthusiasm.

The President appointed George H. Carveth and J. T. Fotheringham, auditors.

Dr. McNeill moved that the report of the Nominating Committee should be received now. Carried.

Dr. Roddick, the chairman of that committee, then presented his report.

Ottawa was selected for the next place of meeting.

President. R. W. Powell, Ottawa.

Vice-Presidents: For Ontario, A. J. Johnson, Toronto ; for Quebec, A. R. Marsallais, Montreal ; for New Brunswick, Dr. Meyers, Moncton ; for Nova Scotia, W. G. Putnam, Yarmouth ; for Prince Edward Island, S. P. Jenkins, Charlottetown ; for Manitoba, W. J. Neilson, Winnipeg ; for North-West Territories, Hugh Bain, Prince Albert ; for British Columbia, O. M. Jones, Victoria.

Local Secretaries: Ontario, W. N. Klock, Ottawa ; Quebec, J. A. Hutchinson, Montreal ; New Brunswick, G. A. B. Addy, St. John ; Nova Scotia, G. M. Campbell ; Prince Edward Island, H. D. Johnston, Charlottetown ; Manitoba, Smith, Winnipeg ; North-West Territories, H. M. Lyman, Qu'Appelle ; British Columbia, Dr. McGuigan, Vancouver.

Treasurer, H. B. Small, Ottawa.

General Secretary, C. R. Dickson, Toronto.

Dr. McNeill (Prince Edward Island) moved in amendment, that the name of F. N. G. Starr be substituted for that of C. R. Dickson, and that the report be then adopted. This was seconded by Dr. Chown, Winnipeg, and was carried unanimously.

THIRD DAY—EVENING SESSION

Report of Committee on Inebriates.

Dr. James Thorburn, the chairman of this committee, submitted the report, which reads as follows:

Your committee to whom was referred the question of the treatment of pauper inebriates, at the last meeting of the Canadian Medical Association begs leave to report as follows:

At the Quebec Meeting of this Association, a paper by Dr. A. M. Roseburgh was read by the Secretary on this subject. This gentleman has for years taken a deep interest in the reformation of inebriates and about eighteen months ago was commissioned by the Prisoner's Aid Association of Canada to visit institutions and interview specialists with a view of enabling him to formulate a plan for the economic treatment of pauper inebriates. After visiting eight special institutions and conferring with the best known specialists in Canada and the United States, he found that about thirty-four per cent. of those subjected to scientific treatment appear to be permanently relieved from their infirmity. This percentage, he is convinced, may be very materially increased by the adoption of a modification of the Massachusetts's Probation System—changing the environment of the patients and exercising judicious supervision subsequent to treatment. While he has for many years recommended reformatory treatment with prolonged detention for the more hopeless class of inebriates, he is convinced that, for the incipient drunkard and the more hopeful class a few weeks' hospital treatment will be effective in a large percentage of cases, more especially if the case be followed up by judicious management subsequent to treatment.

Since the paper referred to was read at Quebec, the matter has been considered by the Ontario Medical Association and the plan therein outlined, was fully endorsed and also commended to the Ontario Government for adoption. We learn that influential members of the Ontario Government, to whom the scheme was submitted at an audience given by them to a committee of the Ontario Medical Association, expressed themselves as being very favorably impressed therewith and that they were disposed to recommend its adoption in Ontario.

The scheme endorsed by the Ontario Medical Association and recommended by the Ontario Government, briefly stated, is as follows:

(a) The appointment by the provincial government of an inspector of inebriate institutions. This inspector should be a qualified medical practitioner, who has made the medical treatment of inebriety a special study.

(b) The inspector should organize in the city of Toronto a hospital for the medical treatment of pauper inebriates of the more hopeful class, and in other cities of the province an inebriate department in the existing general hospitals.

(c) The inspector should also arrange in connection with each institution, where inebriates are received and treated, an organization or agency for the adoption of the probation system and giving a helping hand to the patients subsequent to treatment for inebriety.

(d) The inspector should provide for the adoption of a rational course of medical treatment for inebriates in accordance with the tenets of legitimate medicine only, to the exclusion of the use of any proprietary remedy.

Under the circumstances here cited, we beg leave to make the following recommendations:

1. While we are of the opinion that for the successful treatment of confirmed drunkards prolonged removal from temptation in a properly equipped reformatory is very desirable, if not absolutely necessary, we would nevertheless be disposed to endorse the plan herein outlined for the economic treatment of pauper patients of the more hopeful class, either in cottage hospitals or in a special department of general hospitals.

2. In case the plan of treatment of inebriates here referred to should be undertaken either by the Ontario Government or by any of the other provincial governments, we bespeak for it the cordial co-operation of every member of the medical profession who is in a position to favor this important undertaking.

Respectfully submitted,

(Signed)

JAS. THORBURN,
J. GEORGE ADAMI,
W. S. MUIR.

Dr. Thorburn moved the adoption of this report, seconded by Dr. McNeill (Charlottetown, P. E. I.). Carried.

Resolution *re* Tuberculosis.

Moved by Dr. P. H. Bryce, and seconded by Dr. Jas. Thorburn: "That in view of the general, expressed belief of the medical profession and by members of this Association, that

bovine tuberculosis is directly concerned in the dissemination of tuberculosis in man, and recognizing the practical character of the several scientific and sanitary measures to-day available for limiting the prevalence of the disease in cattle, the Canadian Medical Association does hereby urge that the Federal Department of Agriculture, and the Agricultural and Public Health Departments of the several provinces, confer together with a view to elaborating a scheme whereby conjoint action can be instituted, so that these several existing laws may be so harmonized as to be made operative towards the eradication of tuberculosis in Canada." Carried.

Notes on Recent European Conventions.

Dr. R. A. Reeve (Toronto) gave at some length, an account of the International Otological Congress, the Ophthalmological Congress and the Section on Ophthalmology of the British Medical Association, paying particular attention to the address of the presidents and the subjects connected therewith. He also spoke of a paper in reference to the use of various silver salts in conjunctivitis, especially argentin and protargol, which are as effective and much less irritating than silver nitrate. In reverting to the British Medical and the Section on Ophthalmology, he referred to the address on "Injuries of the Eye" and took up the question of sympathetic ophthalmia, and said that this dread disease was a sort of malignant inflammation, which, with very few exceptions, destroys the sight of the eye.

Dr. R. W. Powell (Ottawa) the newly elected President, was then introduced to the meeting and in the course of a happy and appropriate speech, took occasion to thank them for the great honor they had conferred on him that day, and said he could assure them that the profession in the city of Ottawa would spare no pains to make the meeting next year, in 1900, the most successful one in the history of the Association.

Surgery Among the Insane.

Dr. A. T. Hobbs (Asylum for Insane, London, Ont.), said that this was a subject that had now attained some considerable width. In order to secure successful treatment, you must have the patient's confidence and co-operation, and with the absence of trust on the part of the patient, it is difficult to produce satisfactory results. The surgeon must be ever ready to depart from the beaten track of routine treatment, and initiate new methods for dealing with these patients. We have encountered all kinds of difficulties in the London Asylum, and experience has taught us how to meet these. First, there is the difficulty of diagnosis. Very little reliance can be placed upon subjective symptoms as seen in the insane. Chloroform was

first used, but this had to be abandoned, as artificial respiration had to be resorted to in many cases. Chloroform is a dangerous anesthetic to use upon the insane. Ether has given satisfaction, and more so when there is preliminary narcosis with nitrous oxide gas. We never remove a healthy ovary or healthy tube. Particularly in operations for inflammatory diseases of the ovaries, tubes, uterus and cervix, there have succeeded surprisingly good results mentally. In fibroids and in the repair of lacerated perinei, the results are not to be compared with these.

Dr. Ernest Hall (Toronto) thought that ninety-two per cent. of insane women have pelvic disease.

Cranicectomy for Microcephalus.

Dr. W. J. Wilson (Toronto) presented the patient operated on, and spoke of the conditions before and after the operation. A male child, aged four years, was brought to him in April last. He had then been taking thyroid extract for nine months, commencing with five-grain daily doses, and gradually getting up to twenty grains per day. He was in a very poor condition. He walked bent forward almost at a right angle, was very excitable, nervous, and always on the go, restless, sleepless, and could only say one word: "mamma." It was "mamma" for this and "mamma" for that, and for everything. The operations were done on him in four stages, with the object of preventing shock. We removed a piece of bone 1x2 inches, and the next morning he sat up in bed and tried to sing. He is very apt at picking up a tune; he can pick it up at once. Since operation, five month ago, he has learned quite a number of words. He walks in an upright position, and is very much improved in many ways.

Committee on Consumptive Poor.

Moved by E. J. Barrick (Toronto) and seconded by R. W. Powell (Ottawa), That the following members, together with the mover and seconder, constitute a committee, and report at the annual meeting of the Association, in 1900, upon the best means of dealing with the consumptive poor, including the providing the necessary funds therefor: Drs. P. H. Bryce and William Oldright, Toronto; J. A. Williams, Ingersoll; J. George Adami and H. LaFleur, Montreal; J. Laffarty, Calgary, N.W.T., and H. H. Chown, Winnipeg. Carried.

Bovine Tuberculosis.

The following resolution, prepared by Professor J. George Adami (Montreal) was then moved by Dr. Wishart, and seconded by Dr. N. A. Powell:

That whereas, tuberculosis in cattle is disseminated by contact and infection from beast to beast ; and

Whereas, such bovine tuberculosis is prevalent to a very notable extent in other countries ; and

Whereas, up to the present time the Dominion is relatively free from the disease, in this presenting a marked contrast to other countries ; therefore

Resolved, that the Canadian Medical Association is prepared to cordially support the Minister of Agriculture and the Dominion Government in all steps taken to secure a rigorous quarantine of all cattle entering the country, both from across the sea and from over the border ; and, further, believing that the disease is eradicable, humbly begs the Government to take steps to rid the country of this disease, believing that if this be accomplished, incalculable benefit will accrue to the great agricultural industries of this country and to the health of the Canadian people. Carried.

Dr. R. A. Reeve, moved, seconded by Dr. Whiteman, that the usual honorarium be paid the General Secretary. Carried.

The Treasurer's report showed that 241 members were present at the meeting, and thirty odd visitors.

There was a balance of cash on hand of \$249.00.

Deceased Past-Presidents.

Moved by Dr. R. A. Reeve, and seconded by Dr. Atherton, That a memorandum, to be prepared by the President, be incorporated in the minutes and proceedings in regard to the lamented deaths of these ex-presidents : Dr. J. E. Graham, Dr. H. P. Wright and Dr. J. H. Mullin, and that an official expression of sympathy be sent to the widows of our late *confrères*. Carried.

Votes of thanks were passed to Dr. Roddick, M.P., for his labors on behalf of Dominion Registration ; to the Minister of Education, the Hon. George Ross, for the use of the building ; to the City Council, Toronto ; and to the Industrial Exhibition Association for courtesies extended during the meeting.

We are indebted for this report to Dr. Geo. Elliott.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

The twelfth annual meeting of the American Association of Obstetricians and Gynecologists took place in the Assembly Room of the Denison House, Indianapolis, Indiana, on Tuesday, Wednesday, and Thursday, September 19th, 20th, 21st, 1899, under the presidency of Dr. Edward J. Ill, of Newark, New Jersey.

The programme consisted of a short address by the Mayor, followed by a response of the President on behalf of the Association. Many very interesting papers were presented. Among the essayists were: Drs. J. F. Baldwin, of Columbus; L. H. Dunning, of Indianapolis; L. S. McMurtry, of Louisville; D. Tod Gilliam, of Columbus; Robert T. Morris, of New York; Edwin Ricketts, of Cincinnati; W. H. Humiston, and M. Rosenwasser, of Cleveland; Walter B. Chase, of New York; Frederick Blume, of Allegheny; J. M. Duff, of Pittsburg; W. E. B. Davis, of Birmingham, Ala.; W. H. Myers, of Fort Wayne; Rufus B. Hall, of Cincinnati; J. F. W. Ross, of Toronto; X. O. Werder, of Pittsburg; H. W. Longyear and J. H. Carstens, of Detroit; W. B. Dorsett, of St. Louis.

Many interesting and valuable discussions took place on various phases of surgery of the kidney; on hemorrhage following celiotomy; on house-to-house operating; on surgery of the liver, gall-bladder and bile ducts; on the treatment of retro-displacements of the uterus by the various methods, with a comparison of the results satisfactory, unsatisfactory, and dangerous to life. A complete report of the meeting will appear in the *American Journal of Obstetrics*, together with the papers read.

At the banquet, held in the evening, Dr. Reamy, of Cincinnati, one of the contemporaries of Fordyce Barker, Emmett, Thomas, H. P. C. Wilson of Baltimore, and others who were the founders of the American Gynecological Society, a courteous gentleman, whose locks have become silvered with years, stated that as a guest of the Association he had listened with amazement to the discussions that had taken place, drinking in with pleasure all that he had heard. He said that, as a link with the past, his position was different to that of the others present; that he was able to compare the old and the new. He considered that the progress that had been made was marvellous and was glad to know that the progress had not yet ceased, but that the hand of the surgeon was still invading new fields for the relief of suffering humanity. The tribute to the work of the Association,

in the twelfth year of its existence, coming from such a source and coming with all the freedom of a spontaneous utterance, without any attempt at flattery, must find a sympathetic echo in the breast of every Fellow of the Association, as it is but a recognition of patient toil.

One of the features of the meeting was the memorial address on the life and character of Lawson Tait, delivered by Dr. C. A. Dr. Reed and Mr. Lawson Tait spent all night in the tower of L. Reed, of Cincinnati. The Cincinnati *Enquirer* stated that the National Liberal Club in London, and quoted the last few sentences of a piece of very elegant diction. As the reporter of the *Enquirer* was pleased with this portion of the address, and as it is likely to please some of the readers of the PRACTITIONER and show them that Robert Louis Stevenson does not stand alone in writing rhyme in measured prose, we give it here:

"Dr. Tait was away from the hospital, away from the chamber of sickness, from the hall of controversy," said Dr. Reed, "and thus his great mind revelled in its freedom. England, the Indies, Africa, Anglo-American relations, the recent war between China and Japan, the contrasting features of the Occidental and Oriental civilization, the great ethical movements of the world, music, the drama, human happiness, and life itself were themes that he touched with the spark of illumination. As we walked, Big Ben, in Parliament tower hard by, tolled twelve, anon one, and again two. The moon rose and the silhouette of the great city was seen against the tinted sky of the east. The speaker of great thoughts paused to view the majestic scene. I receded a step or two that I might contemplate, in clearer perspective, the more impressive picture of triumphant genius, with the world sleeping at his feet. Thus may he abide in peaceful memory."

Another feature of the meeting was the presence of Dr. W. Japp Sinclair, of Manchester, England, Professor of Obstetrics and Gynecology in Owen's College, of the Victoria University. Dr. Sinclair was president of the Section of Obstetrics and Gynecology at the recent meeting of the British Medical Association held in Montreal. As a guest of the Association he took part in the discussion. Owing to lack of time he will, unfortunately, not be able to visit Canada on this occasion.

The medical profession of Indianapolis tendered a reception to the Association on Tuesday evening, to which all the Fellows and guests were cordially invited. Their courtesy was very highly appreciated by the Fellows.

The next meeting of the Association will take place in Louisville, Ky., under the presidency of Dr. Rufus B. Hall, of Cincinnati.

Progress of Medical Science.

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Ununited Fracture in Children.

Edmund Owen (*Brit. Med. Jour.*, August 19th, 1899), at the meeting of the Section of Diseases of Children, read a paper on the above subject. He puts two queries: 1. Why is non-union after fracture of the tibia and fibula in children of comparatively frequent occurrence? 2. Why does its treatment so often end in amputation? Mr. Owen refers to the frequency with which non-union occurs and the infrequency of the reported cases.

The first essay on the subject appeared in Sir James Paget's "Studies from Old Case Books," published in 1891. Mr. D'Arcy Power, in the 75th volume of "Medico-Chirurgical Transactions," gives a table of 72 cases of ununited fracture of the long bones of children, of which 45 occurred in the tibia and fibula. These writers and Dr. Packard, of Denver, in Keating's "Cyclopedia," assign the cause as neglect in treatment, or failure to recognize the fracture. The essayist answers this by the statement that he has known of a large number of cases which were recognized at once and treated properly, but which failed to unite. He ends his paper by asking if any operator present had ever established consolidation in the ununited tibia of a child. He himself confessed that all his efforts in that direction had ended in complete failure. He deprecated the habit of orthopedic surgeons stating that there was no danger in straightening the crooked legs of children.

Morbid Anatomy of Tuberculosis in Childhood.

Geo. F. Still (*Brit. Med. Jour.* August 19th, 1899), in the Section of Diseases of Children at the British Medical Association meeting, read a paper on the above subject. The material for the paper was based on his experience as Pathologist to the Great Ormond Street Hospital, where, out of 769 consecutive necropsies on children under 12 years, 269 were tuberculous.

Age Incidence.—56.5 per cent. occurred under the age of 3 years, and 43.5 per cent. under the age of 2 years.

Mode of Infection.—After a discussion of the milk infection question (especially in view of the report on tuberculosis by the Council of the British Medical Association in January, 1899) he concludes that infection occurs much more frequently

through the lungs than through the intestines. Of his 269 cases, in all probability 138 cases were infected through the lungs and only 63 through the intestinal tract. (This conclusion is significant in view of Holt's statement that infection through the intestinal canal is rare and that, in his experience, he has never been able to prove definitely that infection from milk had occurred.)

In answer to a question, the essayist said that the bacillus could pass uninjured through a healthy stomach and infect the intestines.

Tuberculous Adenitis.

Geo. Morgan (*Brit. Med. Jour.*, August 19th, 1899), at the Section of Diseases of Children of the British Medical Association, read a paper on this subject. His remarks were limited to cases coming under his own experience of glandular disease of the head and neck. These cases were much less common now than they were fifteen years ago. He makes two large divisions of glands of this part, viz.: those that drain areas of skin and those that drain mucous surfaces.

The post-auricular, occipital and superficial cervical are generally infected from the skin. The others are mostly infected from mucous surfaces, of which the gums and teeth, the tonsils, the naso-pharynx, especially the vault when affected by adenoids, are the most prolific of trouble.

Teeth and Gums.—Spongy and congested gums and carious teeth or stumps are frequently followed in the strumous child by tuberculous enlargement of the sub-maxillary and deep cervical glands. Any one can believe that the bacillus can pass through the soft mucous membrane of gums. And H. Kerner Halle, of Berlin, has lately published observations and experiments to show that the tubercle bacillus can pass through the living pulp of a tooth, down the root, and thus reach the lymphatic glands. The author had examined 3,161 children with swollen glands, with the following result: Seventy-eight per cent. of them had bad teeth of the third or fourth degree in the lower jaw, and in 70 per cent. of these the bad teeth corresponded in position to the swollen glands.

The sulcus, where the mucous membrane is reflected from the gum to the cheek, is a frequent point of entrance for the bacillus, especially is this true of the gum immediately below the lower incisor, which drains into the supra-hyoid gland.

Tonsils and Adenoids.—Many believe that the bacillus of tubercle can and will pass through healthy tonsils and infect the glands, but the author has no experience of this. But he does know that they frequently pass through enlarged tonsils and through adenoids. The importance of healthy structure

in these parts in tuberculous subjects is seen in the frequency of tubercular infection by inhalation, the bronchial glands being infected four times to one of the mesenteric. Enlarged tonsils and adenoid tissue are often tuberculous themselves, as has been shown by experiment.

Treatment.—A great deal can be done for the tuberculous child by care of his food, environment and buccal cavity. Plenty of fresh air, cod liver oil, iodide of iron and tepid bathing. But the author particularly desires to emphasize the local treatment. That is, the source of infection. He caused enlarged glands at the angle of the jaw to disappear by treating a chronic pharyngitis which had caused the enlargement. Another case in which the pigment was painted on the tonsils and on the gum below the lower incisor teeth caused a large supra-hyoid gland to disappear. The pigment was compounded of—

Iodine grs. xii.
Pot. Iod. grs. xv.
Ol. Mint Pep ℥ ii.
Glycerinæ ℥ ii.

This will not affect all glands, but if applied before softening begins it reduces many of them.

If this method does not succeed the glands should be excised, being careful during the operation not to make pressure and to dissect from below upwards.

Treatment of Hernia in Children.

John Langton, F.R.C.S. (*Brit. Med. Jour.*, August 19th, 1899), read this paper at the Section of Diseases of Children.

Prevention.—This includes the proper dieting. Circumcision has been advocated, but the author thinks it to be unnecessary. (In the discussion which followed most of the speakers favored circumcision in suitable cases.) Muscular exercises tend to strengthen the wall of the abdomen, but of course can be used only in children over three years of age.

Treatment by Trusses.—He has practically discarded the skein of wool truss, excepting in cases of emaciated children under one year of age where it still may answer a good purpose. He quoted from an article in the *Annals of Surgery*, by Dr. Bull, of New York, comparing the skein truss with the light spring one, the result being strongly against the skein of wool. The author speaks very favorably of a light steel truss for children; but it must be well made, be of proper size and covered with soft india-rubber, and never be removed except for cleanliness. In answer to the question, How long a truss must be worn? he says: "If the patient is below one year the truss must not be discarded till the age of 4 years. If the

truss is not worn till the age of three or four, it should be worn till the child is ten years of age. If not worn till the age of seven, the truss should be worn till puberty. Statistics show that large numbers of these ruptured children are cured by the truss.

Operative Treatment should be undertaken in the following classes of cases :

- (a) Irreducible omentum.
- (b) Irreducible omentum with fluid in the sac.
- (c) Congenital hydrocele.
- (d) Strangulated hernia.
- (e) Where there is fluid in a hernia sac.
- (f) When proper treatment is impossible owing to incompetence or ignorance of the mother.
- (g) Where a truss has been worn for 3 or 4 years without benefit.

Conclusions.—1. That hernia, in infants, if properly treated, is a curable lesion.

2. Where there is a family history of hernia, preventive measures should be employed as early as possible.

3. Circumcision will not cure hernia.

4. Cases requiring operation are rare.

5. Hernia generally occurs at an age ill-suited for operation, and if properly treated is usually cured before any question of operation arises.]

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

Ichthalbin.

The *Brit. Med. Jour.* of Sept. 2nd, 1899, has an interesting *précis* of Hamburger's paper in *Therap. Monatsch.*, July, 1899, upon this new drug. It is a combination of albumin with ichthyol, analogous to tannalbin. The observations on which the paper was based were conducted in Neumann's *Poliklinik*, in Berlin. About 60 children were treated for various conditions, with about 1,000 grains. The dosage is, for infants under six months, $\frac{1}{3}$ to $1\frac{1}{2}$ grains, thrice daily; in the second half-year, 2 to 3 grains; in the second year, 3 to 4 grains; after three years of age, 7 or 8 grains may be given by increasing the initial dose, and after ten years, 15 grains. It should be given before meals, and best in powdered chocolate, equal parts. It is said to be free from poisonous properties.

The diseased conditions for which it was used were diseases of the skin, particularly eczema, and acute and subacute intestinal catarrh. In eczema it was found that while local treatment was necessary on account of the fact that the irritation

accompanying the disease was not controlled, the drug had a markedly helpful effect on the other side of the eczematous process, the exudation. A weeping eczema was very soon converted into a dry one, and in chronic dry eczema in several cases the drug seemed to hasten a cure by stimulating the skin. It was specially valuable in eczema of the face and scalp, so common in children.

In intestinal diseases constipation was relieved apparently by stimulation of peristalsis through increase of general nutrition. Acute and subacute diarrheas were not relieved. Local effects in the alimentary canal seem to be absent. As regards its general effect, it was plainly seen to have a marked influence upon the appetite and nutrition, thus acting well in chronic catarrh of the intestine.

Lupus.

A. C. White (*Med. Rec.*, July 22nd, 1899): The prospects of the use of liquid air in the treatment of lupus are extremely encouraging. One case of lupus erythematosus, involving the frontal region, both ears, and one side of the face, was put under treatment about two months ago. After two treatments the affected areas entirely desquamated, leaving the derma in perfectly healthy condition, slightly red, and no eschar. This was an obstinate case, which has been under treatment for a long time, resisting everything that had been done for it. There is no evidence of any tendency to recurrence. —*Sajous' Monthly Cyclop.*, August, 1899.

Urotropin in Urinary Diseases.

Ehrmann (*Wiener Med. Presse*, June 18th, 1899) has employed urotropin with very satisfactory results. It is hexamethylenetetramin formed from formaldehyde and ammonia. Given internally formaldehyde is found in the blood, and is then excreted in the urine. In 9 cases of periurethral abscess and cystitis after gonorrhea, where the urine was alkaline and ammoniacal and contained gonococci, and where opening the abscess and washing out the bladder had failed to cure, urotropin in doses of $7\frac{1}{2}$ grains three times a day brought about the desired result in three weeks. Five cases of bacteriuria following chronic gonorrhea were cured permanently. In one case, in spite of urotropin, relapses constantly recurred. Here there was probably a small fistulous communication with the rectum. In chronic posterior urethritis, with cloudy urine, which so long resists deep injections and irrigation of the posterior urethra and bladder, urotropin acted excellently, the urine clearing on the third or fourth day after its administration. Its action appeared to be specially marked in posterior

urethritis, so that after this was cured, any remaining anterior urethritis could be easily removed by ordinary urethral injections. These observations are founded on thirty-two cases. Urotropin also acts well in tuberculous and typhoid cystitis. In the cystitis of the enlarged prostate it lessens the need for vesical irrigation, so that, for instance, in a case where formerly they had been constantly employed, after urotropin they could be omitted for from two to three months. The writer thinks these observations show that urotropin is one of the few of the newer drugs which will retain a permanent place in therapeutics.—*Brit. Med. Jour.*, Sept. 2nd, 1899.

High Altitude and Heart Disease.

Robert H. Babcock (*Med. News*, July 15th, 1899): The conclusions reached regarding the effect of high altitude on heart disease are:

1. All forms of cardiac disease do not contra-indicate sojourn at a high altitude.
2. The ill-effects of low atmospheric pressure in some forms of cardiac disease are explicable on the hypothesis of acceleration of venous flow and corresponding quickening of the heart-beats.
3. Consequently those forms with which high altitude is likely to prove incompatible are pronounced aortic or mitral stenosis, and regurgitant disease complicated by pleural and pericardial adhesions.
4. On the other hand, patients with uncomplicated regurgitant lesions or arteriosclerosis, with or without myocardial changes, may endure low atmospheric pressure without injury.

Paralysis Agitans.

R. T. Williamson (*Med. and Surg. Review of Reviews*, June, 1899): In paralysis agitans, sulphonal or whisky and water, at bed-time, afford a good night's rest. One should also see that the bed is not too soft. Alcohol taken during the day as well as strong tea and coffee increase the tremblings. The patient's living-room should be well ventilated and not too warm. Systematic open-air treatment is valuable, carriage drives are very advantageous, and railway journeys are often beneficial. Although morphine hypodermically gives relief, it is objectionable, as the disease is so chronic. Hyoscine is the only drug which has been personally found useful. One-fourth grain should be prescribed in 6 ounces of chloroform-water, 2 teaspoonfuls of this being given; thus each dose corresponds to $\frac{1}{16}$ grain of hyoscine hydrobromate. The dose may be increased to $\frac{1}{8}$ grain. After some weeks the drug loses its good effect, when it is best to stop it for a time; the good results are again obtained by recommencing.

Editorials.

THE MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

The thirty-second annual meeting of the Canadian Medical Association, held in Toronto, August 30th, 31st, and September 1st, was in all respects a good one—probably the best in the history of the Association. This was a matter of surprise to many, as Montreal has heretofore held the foremost place, and it was scarcely expected that Toronto would draw as large an attendance as the former city. One of the arguments against the formation of an Ontario Medical Association was that such an organization would likely injure the parent society.

The success of the meeting was due chiefly to the magnificent work done by the Executive Committees. The General Secretary worked faithfully during the year. His extensive correspondence with members in all parts of the Dominion helped in various ways. The work accomplished by the Committee of Arrangements, under the chairmanship of Dr. Arthur Jukes Johnson, and the Entertainment Committee, under the chairmanship of Dr. Bruce L. Riordan, was the best that we have ever seen in Toronto, and more like the work done in Montreal during the meeting of the British Medical Association than any other we know of in Canada in connection with medical meetings.

There was such a plethora of papers—and many of them far above the average—that it was found impossible to have them all read. The Executive endeavored to do justice to all, and succeeded fairly well. It was unfortunate that the address in Medicine should have been omitted. Dr. Fotheringham put himself to considerable inconvenience to prepare his address, and many of the members were anxious to hear it. Why he was not called on at the proper time no one seems to know. So far as we can learn, however, it seems simply to have been an unfortunate accident, which everyone deplored. The programme and regular order of business were at times subjected to changes, which no one appears to be able to explain.

Apart from a few such irregularities, the meeting was well conducted. The President acquitted himself admirably.

He delivered an excellent address. As chairman, his remarks were always apt, and well chosen ; his decisions on points of order were quick and clear. Some say they were not always correct. We don't happen to know enough about that mysterious thing called parliamentary practice to be able to give a positive opinion on some of the finer points which came to the surface.

DOMINION REGISTRATION.

It will be generally conceded that the most important subject brought before the meeting was that of Dominion Registration, introduced by Dr. Thomas Roddick, of Montreal. The good work of the latter in bringing the matter before the profession is well known in all the provinces of the Dominion. We are glad to know that there is now no difference of opinion as to the advisability of having some legislation enacted whereby a graduate can get a license to practise in any part of Canada. The only differences that are likely in the future to arise, will be in reference to details.

It was probably a revelation to many of those living in this province to find that so many men from the eastern and western provinces took such a lively interest in, and such a broad view of, the whole subject. We are glad, in the same connection, to see such men as Drs. Williams, Thorburn, Barrick, Geikie, Britton, Macdonald, and others, taking a very lively interest in the matter. Dr. Williams, of Ingersoll, has given the question a great deal of attention, and has rendered valuable assistance to Dr. Roddick in his good work.

THE SECRETARYSHIP.

The Nominating Committee recommended that Dr. Dickson, of Toronto, be secretary. When the report was read, Dr. McNeill moved in amendment, that it be not accepted, but that Dr. Starr be Secretary. The amendment was declared carried. In connection with this matter we express the feelings of many in saying that this report was not presented at the proper time, and any such irregularity is a serious matter.

Apart from this consideration, we acknowledge that the meeting has a right to amend such a report if it thinks fit ; but it is not usual to do so without giving a good and sufficient reason. This Dr. McNeill endeavored to do by saying that it

would be an act of injustice not to re-elect Dr. Starr. We have only to say, as far as Dr. McNeill is personally concerned, that we have a higher opinion of him than he has of us in Toronto; and that we will have to change our opinion very materially before we will get up in any medical assemblage and accuse Dr. McNeill and his friends of trying to do an unjust act.

For years we have refrained from making any comments in this connection; but now we feel impelled to state a few facts. The appointment of the present secretary was never popular in Toronto. The chief reason for this is that Dr. Starr was recognized as an extreme and aggressive *party* man, and as such was not acceptable to a large portion of the members in Toronto. He has become more unpopular for other reasons, which we need not now specify, as years rolled on. The result has been that many men who were formerly strong supporters of the Association have grown lukewarm.

All parties in Toronto combined to make the recent meeting a success, and the results were very gratifying, as all know. We were not in the inner ring as far as the secretaryship was concerned, and, therefore, had no knowledge of what was going on until we learned the result of the meeting of the Nominating Committee; but, now, we are in a position to say that four-fifths of the members resident in Toronto who attended the recent meeting wanted a change. Dr. Dickson, who is essentially a non-party man, was a most indefatigable worker as local secretary, and on that account was chosen by the Nominating Committee as General Secretary.

Under such circumstances we would like to ask Dr. McNeill (for we value his opinion very highly) when it will become *just* to have a change? The Association is going to suffer materially if the change does not come soon. We may say, in addition, that, while we have referred especially to this city, we happen to know that many outsiders agree with the majority in Toronto.

THE TRUNK SEWER.—We are glad to see that the subject of a trunk sewer is once more to the fore; this time at the instance of Ald. J. J. Graham. Some of the aldermen, are as usual, minimizing the evils of the cesspool at the Bay front. If these do not mend their ways we hope they "won't be in it"—"won't be in the swim"—for many more years.

Personals.

Dr. Jerrold Ball reached Toronto in September, on his return from Europe.

Dr. Fred. G. Grasett (Tor. '95), of Port Antonio, Jamaica, was married July 9th, to Miss Kate Lind.

Dr. T. S. Farncomb (Trin. '94) has removed from Rednersville, Prince Edward County, to Trenton.

Dr. Ross, of Richmond, Va., was the guest of Dr. Riordan, of Toronto, during a short visit early in September.

Dr. George A. Peters, of Toronto, was married September 19th, to Constance Mary Redmond, daughter of Chief Justice Sir William Meredith.

Dr. W. F. Maybury (Tor. '97) has resigned his position as superintendent of the Carleton Protestant Hospital, Ottawa, and has commenced practice in that city.

Dr. J. T. Duncan has returned from London, Eng., where he has been paying much attention to Eye and Ear. He has opened an office at 39 Bloor Street East.

Professor Osler delivered the opening lecture, McGill Medical Faculty, Thursday, September 21st. It is just twenty-five years since he became Professor of Institutes of Medicine in McGill.

Dr. Kennedy Crawford McIlwraith, of Toronto, was married September 12th, 1899, to Miss May Saunders, daughter of the late Rev. J. C. Saunders, Bristol, England, and sister of the late Dr. H. J. Saunders, of Kingston.

Mr. Charles Rose, formerly chief of the Brockville police force, has been appointed by the Executive Committee of the Ontario Medical Council to fill the position occupied for years by the late Detective Thomas Wasson.

Dr. Andrew McMeans, a native of Brantford, and a graduate of Trinity University, Toronto, has been practising for several years in Mexico. He paid a visit to some of his friends in Toronto in the early part of September.

Dr. Arthur C. Duffey, son of Sir George Frederic Duffey, of Dublin, spent a few days in Toronto, in September. He is engaged in original research in connection with the etiology of cancer, and has been working for some time in the laboratory in charge of Dr. Roswell Park, Buffalo.

Dr. Wesley Mills, Professor of Physiology, McGill University, Montreal, was one of the most interested visitors at the recent dog show at the Toronto exhibition. It is considered by good authorities on the subject, that Professor Mills' "Book on Dogs" is the best that has ever been published.

Miss Ethel White, daughter of the late Dr. Thomas White, of Hamilton, niece of Dr. James White, and brother of Dr. R. W. K. White, of Hamilton, was married September 20th, to Mr. Gerald Fitzgibbon, barrister, son of Rt. Hon. Gerald Fitzgibbon, Lord Justice of Appeal in Ireland. Among the guests was Dr. White (groomsman), and Dr. Charles O'Reilly, of Toronto.

Dr. O. R. Avison, formerly lecturer on Materia Medica in the Medical Faculty of the University of Toronto, who practised in Toronto for several years, left Canada about six years ago for Korea, where he has been busily employed up to last spring in his work as a medical missionary. Being in need of a holiday Dr. and Mrs. Avison have returned to Canada for a visit of a few months, and will spend the greater portion of the time in Toronto.

At a meeting of the Medical Faculty of McGill University on September 8th, the two following gentlemen were elected to research and teaching fellowships in pathology: John McCrae, B.A., M.B., first-class honor man in natural science and arts, late fellow in biology in the University of Toronto, and late house surgeon to the Toronto General Hospital; and W. W. Ford, B.A. Adelbert College, M.D. Johns Hopkins, and late resident house officer in the Johns Hopkins Hospital. These research fellowships in pathology were recently founded and endowed, one by certain of the Governors of the university, the other by the Medical Faculty. The above are the first appointments, the fellowships being tenable for two years.

We have much pleasure in announcing that Dr. Robert D. Rudolf, of Toronto, passed in July the examination for membership in the Royal College of Physicians, London. Dr. Rudolf is a Canadian, born in Nova Scotia, but received his medical education in Edinburgh, and became M.B. (Edin.) in 1889, and M.D. (Edin.) in 1896. Shortly after graduating he went to India, where he practised five years. He came to Toronto in 1895, and has practised here since 1896. He is a member of the teaching staff of the Medical Faculty of the University of Toronto. So far as we know Dr. Rudolf is the only M.R.C.P. (Lond.) now living in Toronto. Previously Dr. Graham was the only Toronto physician who received the qualification, having passed the examination in 1893.

Dr. Thomas McCrae, of Johns Hopkins Hospital, Baltimore, paid a short visit to Trinity, October 3rd.

Dr. H. B. Anderson, of Toronto, on his return trip from England, where he spent the summer, went to Boston where he remained about a week, and then came to this city, September 29th.

The opening exercises of Trinity Medical College, Toronto, were held in the College Building, October 3rd, when the Rev. Prof. Clarke, of Trinity University, delivered an excellent address. The Dean, Dr. Geikie, and others also addressed the assemblage.

The opening exercises of the Medical Faculty of the University of Toronto were held in the Biological Department, October 2nd. Dr. A. Primrose delivered an admirable address on the "Life and Work of John Hunter," and short addresses were delivered by the Dean, Dr. Reeve, who acted as chairman, the Hon. Edward Blake, and the Hon. G. W. Ross.

Obituary.

James Cumming, M.A., M.D., F.R.C.P.I., Professor of Medicine Queens College, Belfast, died somewhat suddenly at his seaside residence in Antrim County, August 27th, aged 66.

John Duncan, M.A., M.D., LL.D., F.R.C.S.E., F.R.S.E., consulting surgeon to the Edinburgh Royal Infirmary, died August 25th, aged 60. Dr. Duncan's grandfather was the founder of the firm of Duncan, Flockhart & Co., the well-known chemists, and his father, Dr. James Duncan, occupied a prominent position in the medical profession in Edinburgh, being for some time surgeon to the Royal Infirmary.

Book Reviews.

The Hygiene of the Mouth. By R. DENISON PEDLEY, F.R.C.S. (Edin.), etc., Dental Surgeon to the Evelina Hospital for Sick Children. London: J. P. Segg & Co., 289 and 291 Regent Street West.

This well-written and most useful little work consists of two long chapters, the first dealing with the hygiene of the mouth in children, and the second with the same problems in the adult. It should be in the hands of all school-teachers. A course on the subject should form a part of the work done in our various schools for the training of teachers. And the profession at large should have more knowledge of the subject, and be more fully seized of the importance of it. This work should suit admirably as a text-book in the premises.

Dudley's Gynecology, A Treatise on the Principles and Practice of Gynecology. By E. C. DUDLEY, A.M., M.D., Professor of Gynecology in the Chicago Medical College, Chicago. In one very handsome octavo volume of 652 pages, with 422 illustrations, of which forty-seven are in colors, and two full-page colored plates. Cloth, \$5.00; leather, \$6.00; half-morocco, \$6.50. Net.

The author of this very interesting volume has adopted a rather different line of treatment in the work in hand from the stereotyped treatise. He is undoubtedly a teacher, and his extensive experiences are embodied in the work. The material is based on the most modern principles and all of the useless material is omitted. The operations are lucidly described and aptly illustrated. A new departure is introduced in a chapter on "Dress in Relation to Diseases of Women." The matter is very appropriate and well worthy of careful study. We can confidently recommend this work to the busy practitioner and advanced student.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 490 pages, twenty-eight illustrations and three colored plates. Philadelphia and New York: Lea Brothers & Co. June, 1899.

It is not possible to adequately review this volume; its contents are too elaborate to be reviewed in the small space at our disposal. The June volume, which was delayed in reaching us, contains four distinct and comprehensive reviews of surgery

and medicine. "The Surgery of the Abdomen, including Hernia," by William B. Caley, embracing 125 pages, is of itself quite worth the subscription price. The subject is most thoroughly gone over, and the latest methods of intestinal surgery completely elucidated. The Leplace forceps for closure of the divided ends of the gut in making anastomosis, Haslead's rubber inflators, and all the many other devices of intestinal surgery are described. "Gynecology," by Dr. John E. Clark, embraces 108 pages, and is written in a most conservative vein. It does one good to read of gynecological subjects treated in this manner, because of the great desire to operate "early and often" that the general literature points to. Beside these two admirable essays, Dr. Alfred Stengel devotes 128 pages to "Diseases of the Blood," etc., and Dr. Edward Jackson eighty pages to ophthalmology. We know of no series that has ever appeared that contains so much kernel as *Progressive Medicine*.

Enlargement of the Prostate; its Treatment and Radical Cure.

By C. W. MANSELL MOULLIN, M.D. (Oxon.) F.R.C.S., Surgeon to and Lecturer on Surgery at the London Hospital; Examiner in Surgery at the University of Oxford, etc. Second edition, with plates; octavo; 211 pages. Price, \$1.50. London; H. K. Lewis, 136 Gower Street, E.C.

It is pleasing to find a work appreciated to its full extent, and the appearance of subsequent editions testifies most emphatically to this point. The surgery of the prostate is making rapid strides. There are comparatively few cases in which relief cannot be offered at the present day. The author in the preface to the second edition makes clear this fact. He says: "Thanks to the progress which has been made in the surgery of the prostate in the course of the last few years—progress which only became possible when the true sexual character of the gland had been once more established—there is now no case of enlargement in which perfect relief cannot be obtained, provided only the secondary consequences which so often and so entirely unnecessarily follow it, and which are due in the vast majority of instances to the careless use of catheters, have not been allowed to work irreparable harm upon the walls of the bladder." The work should be read by every practising physician and its precepts followed.

Warner's Pocket Medical Dictionary.—Warner's Pocket Medical Dictionary is an up-to-date work in every sense of the word. The latest medical terms have all been added, 10,400 words, terms and phrases are spelled, pronounced and defined. The definitions are concise and comprehensive. Type bold and easily readable. Paper and binding neat and especially service-

able. Bound in flexible leather, round corners, colored edges. Complete tables of arteries (six pages), bacilli, spirilli, streptococci, micrococci, bacteria (eleven pages), muscles (twenty-four pages), nerves (twelve pages), dose table (fourteen pages). This latter comprises a complete list of all drugs with their doses arranged in apothecaries' measure and their metric equivalents. Every one of its 413 pages is well written and will prove a valuable addition to the library of quick reference books of any physician. It will be sent to any address upon receipt of 75c., stamps or money order. Address, W. R. Warner & Co., Philadelphia.

The Treatment of Pelvic Inflammations through the Vagina.

By WM. R. PRYOR, M.D., Professor of Gynecology, New York Polyclinic; Consulting Surgeon, City (charity) Hospital; Visiting Surgeon, St. Elizabeth Hospital, New York City.

Though this is a little volume it contains much that is valuable. It is written in a clear, concise style, showing that it is the outcome rather of practical experience than of theories on the various subjects dealt with. Though palliative treatment is laid down, the spirit of the book is aggressive surgical interference.

On the question of acute septic endometritis, a resort to curettage is advised, "if, after two days' treatment, the local and general symptoms do not improve." Great stress is laid upon this method, and the advice is strongly urged that the attendant should urge the patient to have the infected uterus cleaned out. If this operation is done imperfectly, or too late, the *cul-de-sac* will have to be opened.

The chapter on "Puerperal Infection" is strong in the direction of surgical interference "should the invasion have passed outside the uterus, curettage, and *cul-de-sac* incision, with proper dressings applied to the pelvis, will cure nearly every case." "Hysterectomy in these cases is not advised."

Full directions, down to the smallest details, are given, and the methods advised are well worth careful study.

The chapter on "Curettage," is of great interest. "Antiseptics have no place in a cavity like this." Reliance is placed on the perfect removal of the diseased endometrium, and caution is given against using caustics, lest scar tissue be produced, which will be followed by pain and pelvic neuritis. The little book is full of facts, directions and sound advice on the treatment of pelvic inflammations. In many instances heroic measures are advocated, such as could only be carried out with success by one of special skill, operating in a well-equipped hospital.

The illustrations are clear—many of them original and useful. The publisher, W. B. Saunders, of Philadelphia, has done his part well, and, altogether, the book is worthy of a good place in gynecological literature.

The Canadian Practitioner and Review.

VOL. XXIV. TORONTO, NOVEMBER, 1899.

NO. 11.

Original Communications.

OPHTHALMOLOGY AND THE GENERAL PHYSICIAN*

BY G. HERBERT BURNHAM, M.D. (Tor.), F.R.C.S. (Edin.), M.R.C.S. (Eng.),

Associate Professor Ophthalmology and Otology, Toronto University; Oculist and Aurist, the Mercer Eye and Ear Infirmary, and the Toronto General Hospital, etc.

The object of this paper is to bring before the general profession some of the diseases of the eye, and also some disturbances associated with the eye, which could be more satisfactorily dealt with, if earlier recognized and more clearly understood. Take acute glaucoma: This is the form in which blindness, almost or quite complete, comes on very suddenly, viz., in one hour or so, associated with agonizing pain. It may attack one or both eyes. The intense redness of the eyeball, the swollen conjunctiva, and the severe pain may cause it to be diagnosed as acute iritis, especially when the attack is limited to one eye. The treatment of iritis is most emphatically contra-indicated in acute glaucoma, or any form of glaucoma. Hence, such a diagnosis is most disastrous. In this form of glaucoma correct treatment must be at once begun, otherwise the sight is never regained. If the oculist can at once be seen, then an iridectomy is done. If, however, some delay must take place, then use a solution of eserine till the oculist arrives.

Chronic glaucoma is a very insidious disease, its chief symptoms being a slowly growing dimness of sight; sometimes a dull headache and rainbow colors about the flame are fitfully present. If this be diagnosed as a cataract and consequently nothing be done till the vision becomes very poor, it is then too late for any operative measure, and blindness, more or less complete, results. Another cause of poor sight gradually coming on, which closely simulates a slowly growing cataract, is

* Read before the Ontario Medical Association, June 14th, 1899.

tobacco amblyopia. Here, if the proper treatment is instituted in time, restoration of sight can be had; but if allowed to go on, thinking the cause to be an immature cataract, then the sight is, as a rule, hopelessly damaged. There are other affections of the optic nerve due to the action of certain medicines, as quinine, alcohol, arsenic and many others less commonly used.

Iritis is another affection which requires to be at once noticed, or otherwise adhesions between the iris and capsule of the lens follow, and consequent impairment of vision. In cases in which vision is thus impaired the usual course is to do an iridectomy. This operation improves the vision; but, as a rule, is far from satisfactory. I used to perform this operation in this class of cases, but now I never do. I use in its place my combined form of treatment, viz., mercury and the iodide of potash internally, and pilocarpin hypodermically. In this way an absorption of the exudation is produced, and a restoration of the vision is brought about, superior in every way to that by an iridectomy, and in addition there is a decided improvement in the condition of the eye generally. Disease of the lachrymal apparatus, known as "watery eye," is a much neglected affection. If taken in the early stage, before the bone becomes diseased, or but slightly affected, it can be much more easily managed than if there is extensive mischief, for this latter condition needs much time, and a long course of treatment. Unfortunately this latter condition is much the more common. The public, and many physicians, consider it too trivial an affection to be paid much attention to. There was once the same carelessness in regard to discharges from the ear, but thanks to the recognition of its dangers by the profession and through them by the public, the lamentable results from that neglect are now seldom seen. If the same care were exercised regarding lachrymal diseases, the condition of extensive destruction of the bone would as seldom be met with; and hence much more speedy and satisfactory results of treatment. The probes used in the treatment of this affection have eight sizes. I use the four smallest sizes only. The four largest sizes are never employed by me. The use of these latter is always attended with much greater pain and suffering than the four smaller. Moreover, I consider no benefit is derived, in fact a contrary effect. Frequent probing is not needed in the plan of treatment I adopt.

I now wish especially to call your attention to eye-strain. This is now acknowledged by the profession to be a decided factor in many peculiar phenomena of the nervous system; but its full significance is by no means realized. Some physicians regard it so carelessly and so little comprehend the

great difficulty in giving the proper glasses for such cases that they tell their patients to go to the nearest watchmaker or druggist to get glasses fitted. This procedure is very wrong, and most unfair, and is as if an oculist sent a patient for general treatment to a quack instead of to a physician. The giving of glasses, known under the term, refraction, is a most difficult branch of ophthalmology, and often taxes to the fullest extent all the resources of an oculist. Besides there is often associated with the error of refraction actual diseases of the structure of eye itself, or of the addenda of the eye. Let it be thoroughly understood that great eye-strain may be present though the acuteness of vision may be up to the full normal standard, or even above it. This is especially the case where there is an inequality in the two eyes. That is, one eye may be normal and the other only a little removed, or both eyes may be abnormal.

The eye, it must be remembered, always strives to get the clearest image of an object possible. If the eye be normal, this is got with the normal effort, and hence this effort is not felt. However, where there is an abnormal condition of the eye, this clearness can only be obtained by an effort greater than the normal. Hence it is merely a question of amount, time, and the surroundings before the nervous phenomena of eye-strain are shown. Some of them are: Headache, migraine or sick headache, neuralgia, spinal irritation and neurasthenia, chorea, epilepsy, mental disorders, disorders of the stomach and bowels, etc.

The narration of some of my cases, if I had the time, would be very interesting and convincing. Therefore, do not forget that most marked eye-strain may be present with good vision; for it is the continuance and amount of excessive effort made by the muscles of the eye which constitute eye-strain, not the mere fact that the vision is poor.

I hope I have succeeded in impressing upon you the importance and difficulty of prescribing the proper glasses for the eye, and the necessity of you doing your share in showing to the public the farcical nature of the claims of the so-called "doctors of refraction" to their forbearance or to their confidence.

167 Bloor Street East.

ACUTE DIABETES.*

BY DR. A. F. MCKENZIE, MONKTON.

Herbert T., twenty years of age, cheesemaker, first consulted me in the fall of 1898, for trouble in connection with a partially erupted wisdom tooth. He was tall and slim, and complained of feeling run down; but this was attributed to his not having eaten well on account of the trouble with his tooth, and to his having at the same time continued to work hard at his trade. A small portion of overlapping gum was excised to relieve the tooth trouble, and a tonic mixture was prescribed. I did not see him again professionally until the 9th of January last. He then told me that while on a visit to some friends during the Christmas holidays he ate rather freely of sweet food, and drank a good deal of cider. At the same time he noticed that he was passing more than the usual amount of urine, and felt very thirsty. He consulted me regarding these symptoms about two weeks after they were noticed by him. The urine had a specific gravity of 1032, and gave a very positive reaction for sugar. His tongue was large, flabby, and covered with a white fur. His breath had a heavy odor. He complained of a nauseous taste constantly present in his mouth. He stated that he had been troubled with constipation for years, but had been much worse in this respect since the commencement of his illness. He was instructed to avoid the use of sugar in all forms, and was given some calomel and also some boracic acid, 10 grs. to be taken in solution four times a day. This was prescribed as an intestinal antiseptic on the strength of some cases recently reported in the *British Medical Journal* as having been successfully treated with this drug. He was instructed to measure the amount of urine passed, and next day reported that during the twenty-four hours he had voided 156 ounces, or nearly four times the normal quantity. On January 13th, four days after consulting me, the amount of urine was reduced by 23 ounces, the sp. gr. remaining the same, 1032. The pulse was noted as being slow, 64 to the minute, and the temperature $96\frac{1}{2}^{\circ}$. Two days after there was a further reduction of 12 ounces, and the sp. gr. was reduced to 1030; pulse 60; temperature $95\frac{1}{3}^{\circ}$, three degrees below normal. Patient thought he felt some better, but complained of his bowels remaining constipated in spite of laxatives.

On the morning of January 21st, twelve days from the time he first consulted me, I was asked to go to see the patient as he

*Read before the meeting of the Ontario Medical Association, August, 1899.

seemed to be not quite so well. Up to this time he had been coming to the office. When I arrived he expressed himself as feeling better. His pulse was 68, temperature 98°. As this was the nearest approach to normal that his temperature had been since he came under my observation, and as he reported that during the previous twenty-four hours he had only passed 108 ounces of urine with a sp. gr. of 1034, I was inclined to think that his condition, instead of being worse, was possibly a little better than it had been. During the day I made a quantitative analysis of the amount of sugar in the urine, and estimated that the patient was passing a little more than ten ounces in the twenty-four hours. Next day I was sent for again to see the patient, and found him complaining of soreness in the limbs, headache, a slight cough, temperature 101.8°, and pulse 120, an increase of 42 over what it was on the preceding day. As other members of the household were suffering from "la grippe," I concluded that this was the cause of the fresh symptoms. For the next few days the temperature ranged between 102° and 104°. The respirations were slightly increased in frequency. The cough was not very troublesome. The expectoration was slight and a few times of a dark color, but never rusty. Examination failed to reveal any tubercle bacilli. No marked physical signs developed to indicate consolidation or other serious trouble in the lungs. About twenty-four hours before death the patient complained greatly of pain in the lumbar region, at times crying out with it, although partially unconscious. Secretion of urine was diminished in quantity. Some which was set aside for examination was unfortunately thrown out. Profound coma set in, and the patient died on the 26th of January—five days from the onset of the influenza, seventeen days after consulting me, and about one month from the onset of diabetic symptoms. No *post-mortem* was held.

According to statistics diabetes mellitus does not appear to be so common in America as Europe. The mean annual mortality for the whole of Europe is about 5 per 100,000 of persons living. In Paris, however, it is as high as 14, and in Scotland, Norway, and Prussia, as low as 2. The rate in America is given as 2.8. Among 35,000 patients treated at the Johns Hopkins Hospital and dispensary, there were only ten cases. An examination of the registration reports of Ontario for the five years, from 1893 to 1897 inclusive, shows that 615 deaths were due to diabetes, no distinction, however, being made between cases of diabetes mellitus and diabetes insipidus. Let us assume that these were all cases of diabetes mellitus. Of the 615 cases, 379 were males and 236 females, the ratio being about the same as what generally occurs, viz., 3 to 2. The annual death rate per 100,000 of persons living was 4.47, being

considerably greater than the average for the United States, and almost equal to the average European rate.*

The annual rate for Toronto alone was 5.15 per 100,000. Out of 2,011 cases of deaths from diabetes occurring in England and Wales, about 12 per cent. were twenty years of age or under, while in Ontario the percentage was a little over twenty. It would therefore seem that unless a sufficient number of fatal cases of diabetes insipidus have occurred to materially affect the figures, we may conclude that Ontario has a greater death rate from diabetes mellitus than has the United States, and almost as large as the average European rate. Moreover, a larger percentage of cases occurs in young people in Ontario than in England and Wales.

The disease is said to be unknown among the Chinese and Japanese, and the negroes of Africa, and this immunity of the negro appears to persist, partially at least, in America. On the other hand it is very common among Jews, and in certain large cities of Europe, particularly Paris. Intense application to business, over-indulgence in food and drink, with a sedentary life, seem particularly prone to induce the disease.

The excessive use of sugar, beer and cider does not in itself appear to cause the disease to prevail. Deaths from diabetes in the cider-drinking counties of England and the beer-drinking counties of Prussia are below the average. It is possible, however, that in individual cases, such as the one I have related, the excessive use of these articles may stand in a causal relation to the onset of the disease. There is frequently a family predisposition, but I could find no history of such in my patient.

The pathology of diabetes is still involved in some obscurity. It is not likely that any one theory will be found to explain all cases. Normally, the carbohydrates taken in the food are stored in the liver as glycogen or animal starch. The glycogen is withdrawn from the liver as required by the system, being reconverted into sugar. Whenever the sugar in the systemic blood exceeds a certain amount, it appears in the urine, setting up glycosuria. This condition may be supposed to be produced by (1) An excessive amount of food, more than the liver is able to store up as glycogen, so that part of the sugar coming to the liver in the portal vein passes directly into the systemic circulation. This would explain some of the cases which are easily controlled by regulation of the diet; (2) some disturbance of the liver function

* The details of the deaths in a few of the large towns were omitted from the copy of the report for 1896, which I secured. In striking the average rate, however, the population of these towns was deducted from the total population of the Province, so that the omission would not likely affect the average rate one way or the other. The average population of the Province for the five years was estimated as 2,754,506.

due either to structural change in the liver itself or to some remote influence exercised on it through its nervous mechanism; (3) defective assimilation of the glucose in the system. Undoubtedly in some of this class of cases the pancreas is at fault.

Saunby summarizes the morbid anatomy of the disease as follows: "Diabetes has so profound an influence on the general nutrition of the body, that it tends to produce structural alterations in the various organs, which are for the most part of a secondary and degenerative character. The exceptions are (1) the tumors and growths in or near the medulla oblongata and the vagi nerves; (2) a few instances of primary liver disease; and (3) cirrhosis, and other destructive changes in the pancreas. The one important addition to our knowledge of the morbid anatomy which the last few years have yielded, is undoubtedly the lesions of the pancreas, and we are justified in regarding these changes when present as the cause of the symptoms of chronic Bright's disease." Experiments upon dogs prove that extirpation of the gland causes all the classical symptoms of the disease. On the other hand, mere obstruction of the pancreatic duct is not followed by any of these symptoms. Nor do they occur if a small part of the gland be left, even if the duct be removed. Grafting a small portion of the gland outside of the abdominal cavity in the muscles of the external walls will also prevent the onset of the symptoms. The relation of the pancreas to some cases of diabetes appears to be very analogous to the relation between the thyroid gland and myxedema. It has been suggested, on the one hand, that the pancreatic secretion in some way controls the sugar-forming function of the liver, and, on the other, that the pancreas secretes a sugar-destroying ferment, which passes directly into the blood. No one, however, has yet succeeded in obtaining such a ferment from the pancreas, and pancreatic extracts, however administered, have failed to control glycosuria. It is, however, to be hoped that further knowledge will place the treatment of pancreatic diabetes on the same satisfactory footing as that of myxedema.

With regard to the cause of the disease, in my case it would be idle, in the absence of a *post-mortem* examination, to speculate. However, I think it is safe to assume that rapid growth, close application to work and autointoxication from absorption of intestinal poisons, caused by prolonged constipation, had something to do with the onset of the trouble. In reference to the constipation, it is interesting to note that Charrin and Carnot have proved that it is possible to render a dog diabetic by injecting infective fluids derived from the bacillus coli, bacillus pyocyaneus, and streptococci, into the pancreatic duct,

and it is possible that in long-continued constipation the pancreas may be more liable to infection by these organisms, which occur so abundantly in the intestine. Finally, the indulgence in cider and sweet food, which immediately preceded, or at least accompanied the commencement of the symptoms, added another link to the chain of causation.

It may be stated as a general rule admitting of exceptions, that the younger the patient the more rapidly fatal diabetes is apt to be, so that most cases of what might be termed acute diabetes occur in young people. Any acute infectious process, such as influenza, is very liable to terminate fatally, as in my case. I am not aware that there has been any decided advance of late years in the treatment of diabetes. Regulation of the diet, general hygienic and symptomatic treatment are still recommended. There appears to be a tendency to be a little less strict in the restriction of diet than was thought at one time advisable. Of the various drugs recommended, opium and its derivatives appear to be still the ones most relied upon.

No opium was used in this case, excepting towards the termination, when one or two doses of morphine were given to relieve pain and restlessness. Various intestinal antiseptics have been recommended. In this case I used boracic acid, and there certainly was a diminution in the glycosuria, but it is difficult to say how much of this diminution should be credited to the medicine, and how much to the restriction of diet.

Diabetic coma generally proves fatal, although recoveries are reported. Active purgation and the use of saline infusion injected into the bowels, under the skin or into the veins, are the most likely remedies. I did not use the saline injections in my case, as I considered it hopeless. A case successfully treated by this means was reported in the *Epitome of the British Medical Journal* of February 25th of this year. In five days 14 pints of saline solution were used, $3\frac{1}{2}$ of which were injected directly into the veins, and the rest subcutaneously. Besides this, he had three enemata containing $17\frac{1}{2}$ fluid ounces each. The patient died four months after of empyema and phthisis. The pancreas was found to be partly absent. The reporters of this case collected nineteen others which had been treated by saline injections. Of these, only one recovered from the coma, but few or none appear to have received such copious injections as mentioned above.

Selected Article.

MEDICAL EDUCATION IN DIFFERENT COUNTRIES.

We extract the following interesting information with reference to medical requirements in various countries from the Presidential Address delivered by Dr. R. McNeill, Prince Edward Island, before the Maritime Medical Association, Charlottetown, July 12th, 1899, and published in the *Montreal Medical Journal* in October :

THE GERMAN EMPIRE.—(Population forty-one millions.)—There are twenty-three universities which confer the doctorate. To matriculate, the applicant must either present a certificate of a gymnasium or pass a preliminary examination upon Latin, Greek, German, history, mathematics and the elements of natural science. The course extends over four years of nine and a half months in each year. The right to practise, however, can only be obtained by passing the State examination which is conducted by a board composed of the professors of the different colleges appointed annually by the Ministry. The degree of Doctor has no special privileges attached to it, other than that it admits the possessor to examination for official position.

AUSTRO-HUNGARIAN EMPIRE.—(Population about thirty-six millions.)—There are six medical schools all supported by the government. To matriculate, the applicant must present a certificate from a gymnasium. The course of study extends over a period of at least five years, of about nine months in each year. Examinations are held at the end of the second year upon the various subjects of the first two years; and at the end of the fifth year upon the subjects of the preceding three years; two or three months after the latter examination the candidate must pass a third and final one, which secures the diploma of Doctor of Medicine, with the right to practise.

RUSSIA.—(Population over eighty-five millions.)—There are eight medical schools in Russia. To matriculate, the applicant must have a certificate from a gymnasium. The course of study extends over five years, with examinations at the end of each year. The arrangement of the course of study is similar to that of Germany. Upon passing the final examination upon all the subjects of the entire course the candidate receives the right to practise with the title of "Physician." To obtain the degree of M.D., he must have the above title and must undergo a written examination, and also present a thesis. There was formerly a third degree, M.D., C.M., obtained after an examination in surgery, but it is now becoming obsolete.

SWEDEN.—(Population four and one-half millions.)—There are two universities and one academy all of which confer the license to practise. To matriculate, the applicant must present a certificate from a gymnasium. Three years after matriculating the student is required to pass the medico-philosophical examination which includes physics, chemistry, mathematics, botany, zoology, and comparative anatomy. Three years later he must pass the examination for the academic degree of candidate in medicine which includes anatomy, physiology, physiological chemistry, general pathology, pathological anatomy, and pharmacology. Four years later he must pass a final examination upon practical medicine and surgery, obstetrics, ophthalmology and medical jurisprudence. Upon passing the above examinations the candidate receives the right to practise. Attendance upon lectures is not obligatory but the student is obliged to attend clinics for one and a half years. The course of medical studies is thus not less than ten years.

NORWAY.—(Population nearly two millions.)—The only medical school is in connection with the University of Christiana. To matriculate as a medical student the applicant must pass two preliminary examinations—one in arts, including Norwegian, Latin, Greek, French, German, English, mathematics, geography, and history, and one in philosophy, including geometry, zoology, botany, astronomy and the elements of chemistry and physics. He then enters upon the study of medicine proper, which on an average occupies six and three-quarter years. There are three examinations arranged as follows: first examination held two and a half years after matriculation, upon anatomy, dissection, use of the microscope, histology, chemistry (organic and inorganic), zoology, and botany. Second examination held three and a half years after the first upon physics, pharmacology, toxicology, medicine, therapeutics, general pathology, and pathological anatomy, surgery, ophthalmology, dermatology and syphilis. Third examination held about one year after the second, upon surgery and bandaging, topographical anatomy, obstetrics, and gynecology, diseases of children, forensic medicine, hygiene, and a practical examination in medicine and surgery. Thorough practical work in connection with the various hospital wards is also obligatory. Upon passing the examinations, which are conducted by the faculty, the candidate receives the right to practise. The doctorate is a scientific degree, giving the right to lecture at the university, and can be obtained only by passing a very severe examination.

DENMARK.—(Population nearly two millions.)—Has one medical school in connection with the University of Copenhagen. To matriculate, the candidate is required to present a

certificate from a recognized literary institute, and must then attend a course of two years upon zoology, botany, physics and chemistry, including analysis. After passing the examination on these subjects, he is admitted to the course of medicine which extends over five years. The degree of M.D., with the right to practise after the final examination, is then conferred.

FRANCE.—(Population thirty-six millions).—There are six academies conferring degrees and sixteen preparatory medical schools. To matriculate at an academy, the candidate must have the degree of B.A. and B.Sc. The course extends over four years of ten months in each year. In addition there are required practical laboratory work, and clinical work in connection with the hospitals, for two years. This may be done either the last two years of the course or the last year and the year following. There is a practical examination at the end of each of the three first years, and at the close the final examination for the Doctorate consists of five parts, including all the subjects of the course, together with the presentation of a thesis.

HOLLAND.—(Population one and a half millions).—Has three universities supported entirely by the State. To matriculate at a university the applicant must present a certificate from a gymnasium or undergo an equivalent examination. The course extends over six years. The right to practise is not conveyed with this degree, but can be obtained only by passing an examination before a special board consisting of eight professors appointed annually by the government.

BELGIUM.—(Population over five millions).—Has four universities, two of which are supported by the State. To matriculate, the applicant must be a graduate of a literary college or pass a thorough preliminary examination. The course extends over five years, and includes practical laboratory work, operative surgery, and attendance for three years upon clinics in medicine, surgery and obstetrics. The examination for the degree of Doctor of Medicine is held a few weeks after the close of the course, and includes the general subjects of the course, together with practical examinations in clinical medicine, surgery, obstetrics, and in operative surgery. This degree is conferred by the universities, but the diploma must be legalized by a Government Commission, whose duty it is to ascertain if all the conditions exacted by the law have been complied with.

GREAT BRITAIN.—There are nineteen medical schools; ten, namely, the universities, confer the Doctorate. The remainder bestow the various titles of licentiate, member and fellow. To matriculate, the applicant must either possess a degree in arts or some recognized collegiate institution, or must pass the pre-

scribed preliminary examination. The course has been extended to five years. During the attendance at a hospital the student must serve as clinical dresser for three months, and as clinical clerk for three months. The examinations are two in number, partly written and partly oral. The examinations are quite rigid, and are conducted by a board composed of professors and of others having no connection with the college. Upon passing the final examination the candidate receives the right to practise, with the title (differing in different schools) of licentiate, member, fellow, bachelor of medicine and master of surgery, or doctor of medicine. In Edinburgh the degree of M.D. is only to be obtained after first having taken a degree both of bachelor of medicine and master of surgery, and after having devoted two years to actual practice. No special examination is required, but the candidate must present a thesis. The higher titles, such as F.R.C.S., F.R.C.P., and M.D., have no privilege outside of the college granting them, excepting that they are requisite for appointment on the staff of hospitals of any reputation. The medical profession in Great Britain enjoys that degree of estimation and credit which a science (conferring on mankind the greatest of all comforts) justly deserves. We find that the physicians and surgeons of Great Britain are almost invariably men of liberal education and cultivated minds, and the art of medicine is carried to a singular height of excellence.

AUSTRALIA.—(Population about two millions.)—There are two universities, one at Melbourne and one at Sydney. Before matriculation the candidate must pass a rigorous examination in languages, mathematics, etc. The course of medical study extends over five years of nine months a year, and includes thorough practical work in laboratories and in hospital wards. The examinations are both written and oral. The final examination includes all the subjects of the fourth and fifth years with practical tests in dissection, operative surgery, clinical surgery, and medicine. Candidates are required to pass in all subjects. The degree of M.B. with license to practise is then given. To obtain the degree of M.D., which is a title merely conferring greater professional prestige, the applicant must have taken the degree of M.B., and subsequently have passed two years in hospital practice or five years in private practise, including in either case attendance for three months on the practice of a hospital for lunatics, and must also pass a special and elaborate examination both theoretical and practical in character.

ITALY.—(Population about twenty-nine millions.)—There are seventeen universities, four so-called free universities and one academy. To matriculate, the applicant must possess a cer-

tificate from a lyceum, which is a high grade of literary institute. The course of medical study extends over six years of nine and one-half months in each year. There are three examinations held at intervals of two years by a commission composed of professors with one or two associates having no connection whatever with the schools and nominated by the government.

Excellence in one or more branches is not allowed to compensate for failure in others. Upon passing a second examination at the end of the fourth year the student receives the title of licentiate, which is merely an academic distinction. The final examination at the end of the sixth year includes not only all the subjects of the entire course of study, but also the diagnosis and treatment of medical, surgical and obstetric cases. Upon passing this examination and presenting a thesis, the candidate receives the degree of Doctor of Medicine and Surgery with the right to practise.

PORTUGAL.—(Population four millions.)—There are three medical schools all supported by the government. The course extends over five years of nine months each. To matriculate, the applicant must pass an examination in Latin, Portuguese, French, English, mathematics, elementary physics and chemistry, natural history, logic, history and geography.

BRAZIL.—(Population about twelve millions.)—There are two universities, requiring a rigid preliminary examination. The course extends over a period of six years. Upon passing the final examination, which embraces all the subjects of the course, and upon the presentation of a thesis, the candidate receives the degree of Doctor of Medicine, with the right to practise.

VENEZUELA.—(Population about two millions.)—There are two universities. To matriculate, the candidate must have the degree of bachelor of philosophy. The course extends over six years.

CHILI.—(Population two and a half millions.)—Has one medical school. The applicant must have a diploma of a collegiate institute to matriculate. The course extends over six years.

SPAIN.—(Population about seventeen millions.)—There are three medical schools. To matriculate, the candidate must have the degree of doctor of philosophy. The course of medical study is four years.

CUBA.—(Population was about one million.)—Has one university. To matriculate, the candidate requires to have a degree in arts. The course extends over six years.

UNITED STATES.—(Population about seventy millions.)—Has one hundred and six medical schools, with different regulations in each State. The leading States of Pennsylvania, New York,

Massachusetts, and some others have State qualifications, so that a diploma serves only as a mark of literary distinction, and no longer gives the holder thereof the right to practise. Too many schools have lowered the standard in that country, but now the leading schools of the regular profession have a graded course of four years of nine months, and a preliminary examination.

CANADA.—Our beloved Canada, with a population of about five millions, has eleven medical schools. I need not refer to the collegiate course in this country. The colleges have been doing good work, and always followed in the wake of improvements. For years past the Canadian Medical Association has been endeavoring to educate the people as well as the profession on the necessity of having one qualification for all Canada. At the last meeting at Quebec, the basis of uniformity of curriculum was agreed upon, and the matter entrusted to Dr. Roddick to perfect and complete. We look to him as the Cæsar to lead us across the provincial Rubicon, and have established in Canada—what? the University of Canada, or the College of Physicians and Surgeons of Canada, or the Dominion Medical Council?

Society Reports.

TORONTO CLINICAL SOCIETY.

The first meeting of the year—the fifty-fifth regular meeting of the above society—was held in the society's parlors, St. George's Hall, Elm Street, on Wednesday, the 4th day of October, at 8.30 p.m.

In the unavoidable absence of the President, Dr. George A. Bingham, the Vice-President, Dr. W. H. B. Aikins, occupied the chair.

Fellows present: Geoffrey Boyd, W. H. B. Aikins, F. LeM. Grasett, J. A. Temple, G. S. Ryerson, Fred. Fenton, H. J. Hamilton, A. A. Small, Graham Chambers, G. W. Badgerow, E. E. King, J. O. Orr, A. A. Macdonald, Allen Baines, Adam Wright, A. J. Harrington, W. B. Thistle, Charles O'Reilly, H. B. Anderson, W. H. Pepler, K. McIlwraith, H. A. Bruce, G. Silverthorn and George Elliott.

Nominations for membership—Dr. D. J. Gibb Wishart, by Drs. Elliott and Pepler.

Dr. J. A. Temple drew the attention of the society to the fact that this was the first meeting since the death of one of the Fellows, the late lamented Dr. J. E. Graham, and moved that the following committee be appointed to draft a letter of sympathy to the widow and family of the deceased member: Drs. Grasett, Ryerson, Baines, Macdonald, Temple and Bingham. Carried.

The Use of Peptones in Typhoid Fever.

Dr. Fred. Fenton read a paper with this title, and reported the results obtained with this plan of treatment in two cases. The first case was that of a man aged 21, a patient in the Toronto General Hospital in 1892. The patient had just passed through a severe attack when a relapse supervened. There was high temperature, low muttering delirium and uncontrollable vomiting, which was a very marked feature of the case. The pulse was almost imperceptible, and the patient had a tendency to slip down into the bed. Swallowing became difficult, or almost impossible, and it was then decided to feed the patient per rectum. Ten hard-boiled eggs (the whites alone) were finely minced and mixed with milk and peptonized, and this quantity was administered every twenty-four hours, about a pint being used every four hours. When the rectum became irritable, liquor opii sedativus was employed. The patient got no nourishment by the mouth for nine days, and during that

time he put on flesh. The disease terminated in about three weeks, the patient putting on flesh during the period of fever.

The second case was that of a boy of about eleven years. This was also a very severe case, and it was impossible to get him to take more than a few ounces of milk per day. He developed a troublesome hacking cough a few days after admission, and there was marked consolidation of the base of the right lung, with attacks of cyanosis. He developed pneumoëmia, which condition was also present in the first case. Nutrient enemata were ordered for him every four hours, the mixture being peptonized some hours before being given. After this there were no more attacks of cyanosis, and there was considerable improvement. Both the whites and the yolks of the eggs were used in preparing the mixture in the latter case. To digest the milk in the first case, pepsin and HCl were used; in the latter, pancreatin. The pepsin and HCl mass was better than the other, because in the boy the rectum became very irritable quickly, so that it had to be washed out in order to ensure the enema being retained.

Dr. W. B. Thistle, in discussing the paper, stated that he had not had much experience with nutrient enemata in typhoid fever, because he had not had cases in which they could not be fed by the mouth. He favored the employment of the peptogenic milk powder in preparing the milk for ordinary feeding in typhoid cases. Here you get the peptonized milk, and you also get the excess of sugar, and he thinks this much better than the ordinary peptonized milk.

Drs. Baines, O'Reilly and Chambers, further discussed the cases.

Microscopical Specimens.

(a) Microsporon Audouini.

(b) Trichophyton Megalosporon.

Dr. Graham Chambers demonstrated these specimens of the small spore and the large spore ringworm fungus under the microscope. The microsporon audouini was the cause of 70 or 80 per cent. of ringworm in the scalp of children, and they never affect the surface of the body. The microsporon was not a trichophyton at all. Of the trichophyton there were two kinds, the small spore and the large spore. Some grew outside the hair, and some inside. The speaker described the condition of the scalp and hairs in these cases, and said that under the microscope the large spores will be found in chains, jointed, while the small spores are never in chains. In treating cases due to the large spores, there is hope of improvement in two or three months; but in the smallspore variety, a cure will probably take a couple of years.

Friedreich's Ataxia.

Dr. W. B. Thistle reported this case, and read notes on the disease. He stated he was unable to present the patient, because he lived out of town. The patient was a boy aged 10, who was brought to the hospital on account of an attack of difficulty of walking. This was noticed from the time he was four years of age, and it progressively got worse. The father was healthy, and never had syphilis or private disease. His mother died of phthisis, and her family were free from any nervous diseases. No history of the grandparents could be obtained. The father, a German, came to this country while young, and knows nothing about grandparents. The patient has two aunts, sisters of the father, and they were afflicted somewhat the same way as this boy. There is also in the family an elder brother, who was afflicted in the same way. In the elder brother, the disease came on at the age of seven years, and now, at fourteen years of age, is quite unable to walk, and has marked ataxia. As regards the previous history of the patient, there was no difficulty at birth, and the boy was perfectly well until about four years of age. Then it was noticed he was somewhat uncertain in his gait, and frequently stumbled while walking. The condition has increased gradually, but not very rapidly. He has that peculiar lack of facial expression, and holds his head on one side. One side is marked differently from the other; and at first glance, he looked somewhat like a case of birth palsy. There was no nystagmus in this case, and no abnormal condition noted in the eyes. The doctor sought closely for nystagmus, and did not obtain that symptom; the pupils were equal, and reacted normally to light. With the eyes closed the patient swayed, and would have fallen. Speech slow and difficult, so that he stumbled over words and halted or hesitated. Sight was good; hearing quite normal. Locomotor system had moderately marked ataxia, worse on excitement. Inco-ordination was also marked in both hands, but not to the same degree as in the feet and legs. The inco-ordination was shown when he was asked to button his coat. There was no paralysis, and no indication of muscular weakness. Sensory system: there was abnormality with reference to sensation. Tactile sensation perfect for testing heat and cold, and testing painful impressions, but located impressions gradually. Reflexes: no jerks; are gone absolutely on both sides; plantar also absent; cremasteric, quite normal. Nutrition: skin was healthy-looking; no atrophy, and no evidences of trophic disturbance. The rectal and bladder functions were quite normal. With reference to the feet: he had the characteristic clubbing of both feet, that is, shortening of the plantar arch and condition of hammer toe, particularly noticed in the

big toe. The arch of the foot was lifted very much, and the ball of the great toe was approximated to the heel; and the great toe itself was flexed and stood up almost at a right angle from the dorsum of the foot. From the family history, this condition of inco-ordination coming on in this way in childhood, gradually getting worse, made it quite clear that it was ataxia of spinal type as distinct from the cerebellar type. In the cerebellar type he would likely have had some palsy, particularly of the tongue and other muscles. The lesion affects the posterior columns, crossed pyramidal tracts, direct cerebellar tract, and anterior lateral tract, with the probability that it is more extensive in the posterior columns. These cases have been studied fairly well, and an abundant examination of cords made, and the pathology seems to be pretty well worked out. It is generally considered to be of the nature of a developmental defect, that is, hereditary and congenital; and the occurrence of an infectious disease precipitates the occurrence of the symptoms and intensifies them. There is no reason, however, in this case to attribute anything to infectious disease. Unfortunately there was nothing that could be done to remove the condition, and the prognosis is rather bad, that is, in reference to the recovery. These patients live a long time—the longest on record being about forty-six years after the appearance of the symptoms; but sometimes the condition becomes extreme in a very short time, and the patient may last only two years. This is the shortest period; very likely to last between fifteen and twenty years. The prognosis as to length of life is not good. Coming on at four years of age, it would not be likely that he would live much after twenty. Then there is the off-chance that the condition might become stationary; this has been noticed in these cases. They may become stationary for long periods, and then they may take on further development. Intelligence does not suffer much, but in the latter stage the intellectual functions do become somewhat impaired; but in this boy's case he was quite bright, perhaps more than ordinarily so. There are several conditions which might easily be mistaken for Friedreich's ataxia, if you do not have a very clear family history; but in this case, with a brother and two aunts afflicted, there was no difficulty in the diagnosis. But if the case had come under consideration during the advanced period, it would be rather difficult to distinguish it from ataxic paraplegia, and this affects about the same regions as ataxic paraplegia. However, in paraplegia you are very likely to have some involvement of the sphincters and involvement of the sensory functions. There is now a patient in Ward 5, at the Toronto General Hospital, who has difficulty in speech. There are no eye symptoms, but marked ataxia and

increase of the reflexes instead of loss as in this case. Cerebellar tumor might look like the cerebellar type of Friedreich's disease, but in addition you would get the constant headache and vomiting; and the duration of the condition is very much shorter than that of cerebellar tumor. Primary lateral sclerosis occurs also as a congenital defect. That condition occurs also in early life, and would have a very close resemblance to Friedreich's disease; however, if you had the nystagmus present, it would be strongly in favor of Friedreich's disease. In primary lateral sclerosis there is a more spastic condition, without so much inco-ordination. It is easily distinguished from the birth palsies, because you have marked cerebellar symptoms there.

Dr. H. J. Hamilton asked Dr. Thistle whether there was any tendency whatever to swaying movements of the head or any scoliosis present, as Dr. Thistle had spoken of the tendency of the head to lie upon one shoulder.

Dr. Thistle—There was no rotatory movement. You do get that in the cerebellar form, but this was a typical spinal type. There was no scoliosis whatever.

Fracture of Femur.

Dr. A. J. Harrington exhibited a fractured femur from an old lady aged 76, as the result of a slight injury. In a scuffle she was shoved over and struck her thigh on a hat-rack, and then fell on the floor. It showed the great friability that these bones possess at this time of life, and it is really wonderful with that extreme condition, how she could walk about with the bone in such a weak state. Delirium had set in on the second day, and she died thirteen days afterwards.

GEORGE ELLIOTT, *Recording Secretary.*

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

Albuminuria of Pregnancy.

Dr. R. E. Skeel, in the July *Bulletin* of the Cleveland General Hospital, draws the following conclusions from his experience in dealing with this condition: When the disease is recognized in its early stages, much good may be done by treating the case persistently on the same methods as for nephritis. When epigastric pain occurs, it must be regarded as a serious symptom. Morphine in one or two hypodermic injections is of much value in controlling the convulsions. Venesection, veratrum viride and chloroform are also of importance, as means of arresting the eclampsia. These means should receive a fair trial before immediate delivery is resorted to. If labor is in progress, it should be completed with as much speed as possible. When relief does not follow the employment of the above drugs, anesthesia must be administered to its full degree, and delivery effected as rapidly as possible, having due regard to the maternal structures.

Phototherapy.

Dr. Finsen, of Copenhagen, contributes, by his assistant, Dr. V. Bie, to the *Brit. Med. Jour.* for Sept. 30th, a lengthy and interesting article on the therapeutic value of sunlight and electric light. By special apparatus he has succeeded in concentrating the light in such a way as to secure the greatest possible number of blue, violet, and ultra-violet rays. Those have a very remarkable bactericidal power, and have yielded excellent results in the treatment of lupus vulgaris, lupus erythematosus, and alopecia areata. The power of the chemical rays of light to penetrate the skin is well established. Nitrate of silver, in sealed glass tubes, has been placed under the skin, and successfully acted upon by the light passing through the tissues, and thereby reaching the silver. The apparatus concentrates the light, and avoids burning the patient.

The Pathology of Inebriety.

Dr. T. N. Kelynack, Pathaologist Manchester Royal Hospital, in July issue of the *Quarterly Journal of Inebriety*, takes strong ground that alcoholism in many cases had to be studied

and treated as a disease. The patient must be considered, as a whole, and abnormal conditions of health sought out and corrected. In many cases there was some profound disarrangement of mind. Limiting the study to cases of uncontrollable craving, there were probably 600,000 in the United Kingdom. In some cases it began as a habit, deepening into a vice, and finally into a veritable diseased condition. In some it appears as a distinct morbid condition from the first. In others it is the result of mental derangement. It must be really regarded as a mental disease, a psychological condition. The cause was clear. Alcohol was the great degenerator. Heredity and environment must receive due attention.

Drugs in Cardiac Insufficiency.

Dr O. T. Osborne, in *Medicine* for October, has an article on the above subject. He divides cardiac insufficiency into two classes: incompetence with valvular lesions, and badly aching hearts without valvular lesions. The first class he divides into the acute and the chronic insufficiency. The acute form is a most distressing attack. The patient is in great anguish. If in bed, the head is raised; if standing, usually leaning on the back of a chair for support and to aid respiration. He is bathed in cold perspiration. His countenance is the picture of misery. These attacks may be controlled by the person's own will-power, or the circulation becomes impaired and the brain hyperemic. The sensations become blunted, and relief comes. More blood enters the heart than it can get rid of. The best drug is the hypodermic injection of $\frac{1}{200}$ nitro-glycerine. Amyl nitrite is not so good. Morphia will relieve the pain, but may impair respiration. A nitro-glycerine tablet of $\frac{1}{200}$ on the tongue every fifteen minutes till the head begins to throb usually gives relief. But suppose there is along with the paroxysm cardiac dilatation, edema, passive congestion of the lungs, in such a case the heart must be aided. Digitalin by hypodermic injection gr. $\frac{1}{100}$ to gr. $\frac{1}{50}$ is the most reliable means. In aortic cases, digitalis must never be pushed to a slowing of the heart below 80. In initial cases the heart may be slowed to 60 or less. Strychnia is an excellent cardiovascular tonic in the chronic forms of heart failure. Camphor is also a very valuable heart and brain stimulant. Alcohol, except in small amounts, is injurious. The after effects are paralyzant. In chronic cases of valvular disease rest is a *sine qua non*, and, as a cardiac tonic, nothing approaches digitalis. If the patient shows symptoms of digitalis intoxication, the drug must be reduced, or cactus or strophanthus substituted. By adding cactus to the digitalis less of the latter will do. Cactus tones the heart, but does not constrict the arterioles.

There are many cases of heart failure without organic disease of the organ. In these cases apply warmth to the extremities and body; the elevation of the legs favors return of venous blood; artificial respiration may start the circulation; apply ammonia to the nostrils, and give hypodermic injection of strychnia. Alcohol is useful in these cases, but should not be repeated for an hour. If the patient rallies, but shows symptoms of recurrent weakness, give digitalis.

The Treatment of Typhoid Fever.

Dr. L. F. Rousch, in *Jour. A. M. A.* for September 2nd, writes on the above subject. He holds strongly to the view that the course of this disease can be greatly modified, and its severity lessened, which is for all practical purposes, a sort of aborting of the disease. During the first six or eight days, always give calomel in doses of two to six grains daily. If there is constipation, give it to cure it; if there is diarrhea, give it again to cure it. During the course of the disease always give calomel if the stools take on the character of typhoid motions. By this means the stools should always be kept bilious in appearance. Salicylate of ammonium in five-grain doses should be given every two hours, night and day, while the temperature is above 102. When below this point, only in the daytime. If the drug disagrees, add some aromatic ammonia, or tr. card. co. By the end of the fourth or fifth day the fever is permanently lessened. Do not give food during the first week. The patient is living upon himself, and let him alone. Food only increases the amount of waste materials in the system. Tympanitis should be guarded against. When the bowels become disturbed with gas the very worst consequences are sure to result. Prevent or cure this condition by small doses of calomel and salol. Turpentine and camphor liniment over the bowels is very useful.

Tuberculosis of the Throat.

Dr. W. F. Strangways, in *Medical Age* for September 25th, remarks that in some cases, where no ulceration, or infiltration, can be recognized, there is a marked pallor of the affected tissue, and so out of harmony with the adjacent parts that the attention should be arrested by it. No other disease causes this condition. There is marked laryngeal and pharyngeal anemia, a faulty approximation of the vocal cords, and a changed appearance around the arytenoids. These signs generally precede any evidence of disease in the lungs. When the larynx and pharynx are carefully examined with the laryngoscope, a diagnosis can be made in cases of much doubt and a suitable prognosis given

the patient, often greatly to his relief. When these parts are found normal, it may be stated with great confidence that the patient is not suffering with tubercular disease in any portion of the respiratory tract. When the pharynx is pallid, the larynx of a dull gray color, and there is faulty approximation of the vocal cords, the patient is in great danger.

The Treatment of Infantile Convulsions.

Drs. A. M. Gossage and J. A. Coutts, in *Brit. Med. Jour.* for August 19th, remark that during the attack all that need be done is to place the child in a comfortable position and loosen the clothes. The custom of putting the child in a hot bath does no harm. The addition of a little mustard is stimulating to a delicate child. If the unconsciousness lasts, or is very profound, or the convulsions return, chloroform may be employed. The presence of unconsciousness is no bar to its administration. In most cases, when the anesthesia passes off the consciousness returns. To an infant of six months 3 grains of chloral along with the same amount of pot. bromide may be given per rectum. The inhalation of 1-minim doses of amyl nitrite has met with much favor. Morphia $\frac{1}{32}$ gr., by hypodermic injection, is also of value and quite safe. It may be repeated. When there is reason to suspect indigestion, an emetic, or purge, may be required. The gums may be the cause of much irritation, and it may be justifiable to lance them. In all cases small doses of one of the bromides should be given for a few days. All conditions of ill health, as rickets and syphilis, must receive attention.

The Treatment of Graves' Disease.

Dr. Robinson Cox, in the September issue of the *Montreal Medical Journal*, records his success in the treatment of a severe case by the administration of intestinal antiseptics. He remarks that, of recent years, many pathologists have regarded the disease as due to toxemia from absorption from the intestinal canal of poisons. In this case the several methods of treatment had been tried without good results. Thyroid extract was tried, and the patient was the worse for it. In consultation, Dr. Muir suggested intestinal antiseptics. With this end in view, salicylate of bismuth and salol were prescribed, and an occasional mild mercurial purge. The diet was mainly milk and eggs. Meat, fruit and vegetables were withdrawn. The patient was kept in bed for six weeks. The result was that there was reduction in the thyroid gland, while the pulse fell from 140 to 100. The exophthalmos was later in showing signs of improvement, but by the end of four months was also relieved, as well as much gain in general health. For the

last six months she has attended to her usual household duties with ease. At present the eyes are natural, scarcely any thyroid enlargement, and the pulse 82 and strong.

The Uses of Pilocarpin.

Dr. Stephen Hamsberger, in *Philadelphia Med. Jour.*, August 26th, reports much success from the administration of this drug along with codeia or morphia, in cases of orchitis. The inflammation and pain rapidly subside. The dose used is gr. $\frac{1}{8}$, every two to six hours, as required, to keep up free action of the skin. The same combination of drugs is of the greatest value in hepatic colic. The morphia relieves the pain, and the pilocarpin lessens the spasm. The same is equally true of renal colic. The best results come from its hypodermic administration. In cases of tonic spasm of the diaphragm, a condition calling for instant relief, and in severe hiccough, it rarely fails to give ease. In persistent and severe cramps in one or more of the extremities it is of much value. In cases of intestinal colic, where iced poultices and wet compresses are badly borne, pilocarpine should be tried. The benefit is often very marked.

Acute Anterior Poliomyelitis.

Dr. H. M. Lyman, in the October number of the *Clinical Review*, has some practical observations on this disease. He remarks that the inflammation of the cord, like inflammations elsewhere, is the result of an intoxication of the tissues by some poison product. Inflammation of the cord may be caused by the toxins of any of the infective diseases, as typhoid, measles, scarlet fever, diphtheria, gonorrhea, syphilis, and others. The pneumococcus, the colon bacillus, streptococcus, staphylococcus, are also capable of giving rise to destructive inflammations of the cord and its coverings. In the laboratory, inflammations of the cord have been experimentally produced by inoculation; these attacks manifest themselves in the same way as when they arise naturally, and run through a course of similar duration. There are many varieties in extent and severity from that of all four extremities to only a group of muscles in one extremity. The disease is sometimes epidemic, and no doubt due to some micro-organism not yet isolated. The lesions are inflammatory, and located in the gray matter of the anterior horns. Later on in life the diseased cord may take on chronic degenerative changes, and lead to fatal trouble. In the treatment of the acute stage, the writer prefers a solution of antipyrin and aconite to suit the age, and the free movement of the bowels by means of calomel, gr. $\frac{1}{10}$ every hour. Where the digestive organs are overloaded, a full dose of castor oil is useful. Pain is best relieved by codeine phosphate. Sponging

and baths, when agreeable to the patient, may be employed, but should be avoided where they cause excitement. Convulsions should be treated with chloral and bromide. During the period of convalescence the child should have good food and fresh, with small stimulant doses of strychnia and arsenic. Electricity should be made use of for about ten minutes every day. When the faradic fails to arouse activity, the slowly interrupted galvanic current must be employed, the positive pole over the muscle and the negative over the sacrum. It should be continued for a long time, even if very little improvement appears at first.

SURGERY.

IN CHARGE OF EDMUND E. KING, HERBERT A. BRUCE AND L. M. SWEETNAM.

The Prepuce.

The examination of the prepuce is by no means as frequent as it should be. It is not necessary to circumcise every male child, although it would be to the child's interest in every case. As a factor in the production of nerve disorders and reflex conditions, the tight, irritating and adherent prepuce should never be overlooked. Circumcision will cure ills that one would hardly dare believe to be due to reflex irritation. Reflex conditions are so diverse in their results that the cause may be located with the greatest difficulty, and often overlooked because of a too prominent position. Dr. L. Duncan Bulkley (*Jour. Cut. and Gen.-Urinary Diseases*) reported the following case: Some ten years ago he had had under his care a physician with chancre on his finger. His wife had also been infected. Subsequently they had had a healthy child. About three months ago the child, aged four months, had come to him with a vesicular itching eruption on the legs and abdomen. The pruritis had been so severe as to interfere with sleep. He had excluded syphilis at once, the eruption being simply vesicular, and also with no tendency to run into eczematous surfaces, even after scratching, and he had regarded it as a reflex herpes. He could find no other cause but a long and adherent prepuce. He had, therefore, advised beginning treatment by performing circumcision, no other treatment of any kind being given. One month later he had learned that within three weeks after the circumcision all traces of the eruption had disappeared, and that it had not returned. The eruption had lasted for four months previously, and had resisted all local treatment. It was one of the most striking instances of reflex eruption that he had ever encountered.

An Effective Treatment of Vesical Hemorrhage when caused by Papillomatous Growths.

H. I. Herring, M.B., B.S., in the *Brit. Med. Jour.*, July, 1899, says: Following a suggestion and method of treatment devised by Sir Henry Thompson, the author details twelve cases of true papillomatous growths, the majority of which were vastly improved and cured by injections of gradually increasing dosage of silver-nitrate solution, first inaugurated by the physician, afterwards carried on by the patient himself after he had learned the technique.

The diagnosis is established by microscopic examination of specimens caught in the fresh state. The sessile tumors, as a rule, do not react so well as the pedunculated.

The instruments needed are a No. 7 E. soft, slightly coudée catheter, eye near the tip. A four-ounce india-rubber bottle with a brass tapering nozzle and stop-cock. A standard solution of 1 grain of silver nitrate to 1 drachm of distilled water acidulated with a little free nitric acid. He begins with $\frac{1}{2}$ a drachm of this standard solution (*i.e.*, $\frac{1}{2}$ grain of silver) to 4 ounces of water, heated to 99° F., and the strength is gradually increased until 1 and even 2 drachms have been added. He has never exceeded 2 drachms. No pain should be awakened by the strength of the solution. Asepsis in all details should be attended to. When bladder becomes irritable decrease the dose. Half the contents of the rubber bottle is thrown in at a time, retained a short time, and allowed to flow out, and repeated with the second half. This should be done daily, preferably at night, followed by rest. Treatment should be continued three to six months daily, then the intervals may be lengthened, sometimes treatment may then cease, sometimes must be again renewed. Sometimes it at first increases hemorrhage, which then gradually ceases. In some cases it never entirely ceases till treatment is stopped when it may cease definitely.

Hydrogen Dioxide.

In a number of cases it has been noted that hydrogen dioxide has retarded the healing of a wound. In one case the daily use of the agent for four days enlarged the sinus in the breast, resulting from an operation for carcinoma, and was the means of carrying the infection beneath the axillary scar. The bad effects are due to the forcible dissemination of infectious material by the bubbling of the dioxide. The mechanical action exerted upon the tissues by this agent during effervescence is far greater than is supposed by many to be the case. For this reason it is unsafe to use it in infected wounds in certain locations with or without pus; in abscess

cavities, either acute or chronic, where the walls are supposed to be weak; in closed cavities, and in the tissues surrounding the larynx and trachea, especially in young children.—*The Monthly Cyclopædia of Practical Medicine.*

Surgical Sins.

Dr. Emory Lanphear considers the following as surgical sins: First, operating in hopeless cases; second, delaying opinion as to the gravity of a disease; third, failure to operate in depressed fracture of the skull; fourth, pretending to be clean; fifth, undercharging in order to secure an operation; sixth, stealing patients; seventh, representing capital operations as trifling; eighth, *keeping patients too long under chloroform*. Unwise speed is bad; chronic surgery is worse.—*Maryland Medical Journal.*

Fissure of Anus.

Allingham uses the following ointment:

R Extract of hemlock	5 grains.
Castor-oil	15 "
Lanolin	30 "

M. Sig.: To be applied to parts after each action of the bowels.—*Journal of Medicine and Science.*

[We have had the utmost success with these very troublesome cases by applying ichthyol along the fissure. Care must be taken that the application is made to the fissure only. The treatment should be repeated three or four times at two-day intervals.]

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

A Case of Strychnine Poisoning.

Todd (*Phil. Med. Jour.*) reports a case of a child, twenty months old, accidentally swallowing a tablet containing a $\frac{1}{20}$ grain of strychnine sulphate. The child died within an hour in convulsions.

The Action of Atropine and Pilocarpine on Gastric Secretion.

Riegel (*Allg. Wien. Zeit.*) reports the results of a number of experiments upon man and animals, which establish the fact that atropine given internally inhibits while pilocarpine increases the secretion of gastric juice.

For Coarse Hair.

R	Calci hydrat	℥ ip.
	Orpiment	℥ iii.
	Amyli	℥ i.
	Aquæ calcis, q.s.	
	M. Ft. Pasta.	

S. Spread in a thin layer, scraping off the softened hair with a dull blade. Wash off when burning becomes intense and apply soothing ointment.—MCCALL ANDERSON.

The Antiseptic Treatment of Acute Diseases of the Respiratory Passages.

Drs. Cassoute and Corgier (Marseilles) report that creosotal is a most efficacious drug in acute infectious diseases of the respiratory passages. The crisis of pneumonia appears on the first or second day under its use. If the exhibition of the drug is stopped the temperature rises again, but the attack is shortened provided the creosotal is given in the first stage of the disease. In cases of broncho pneumonia, febrile bronchitis, the creosotal treatment gives equally good results. The courses of the diseases are materially shortened. Dr. Cassoute's method of administration is as follows:

For adults, $2\frac{1}{2}$ drachms in the first twenty-four hours, thus:

R	Creosotal (von Heyden)	℥ iiss.
	Emulsion	℥ ij.

To be taken in four doses.

Or even more simply:

R	Creosotal (von Heyden)	℥ i.
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One teaspoonful ($1\frac{1}{4}$ drachms) morning and night in a cup of hot, sugared milk.

For children:

Up to 1 year of age, 4 to 15 grains of creosotal.

From 1 to 4 years, $\frac{1}{4}$ to $\frac{3}{4}$ drachm creosotal.

From 4 to 6 years, $\frac{3}{4}$ to 1 drachm of creosotal.

From 6 to 10 years, 1 to $1\frac{1}{4}$ drachms of creosotal.

R	Creosotal, according to age, as above.	
	Emulsion or syrup	℥ ij.

To be taken daily in four divided doses.

These doses can be increased without any danger. The administration of the creosotal must be stopped gradually, the doses being diminished in amount and given less frequently, until the last auscultatory sign has disappeared.

Subacute or Chronic Bronchitis.

℞ Terpini hydratis gr. lxxx.
 Glycerini,
 Spiritus, of each ℥ iiss.
 Mellis despumat ℥ ij.
 Tinct. vanillæ m. lxxv.

M. Sig.: Two to four tablespoonfuls a day.

Superfluous Hair.

℞ Barii sulph ℥ ip.
 Zinci oxidi ℥ iv.

M. S. Make paste with water, apply three minutes, then wash off.

Bed-Sores.

℞ Zinc sulphat gr. xlv.
 Lead acetat. ℥ ss.
 Tinct. myrrh m. xx.
 Vaselín q.s ad. ℥ ij.

M. S. For external use.—FREYBERGER.

Administration of Iron with Frequent Blood Counts.

W. H. B. Aikins, M.D.

The value of making microscopical examinations of the blood during the administration of iron is, of course, well known, but it is not made practical use of as frequently in general practice as it should be. The following cases illustrate its utility in scientifically estimating the increase in the red blood constituents. Dr. H. J. Hamilton, assistant pathologist to the Toronto General Hospital, examined and reported upon a series of cases.

CASE 1.—A. R. was admitted to the Toronto General Hospital suffering from tropical malaria contracted in Cuba; after this condition was relieved an examination of the blood was made. This showed hemoglobin 48 per cent. and the number of red corpuscles c.cm. to be 2,640,000. Pepto-Mangan (Gude) was then prescribed for this condition in teaspoonful doses four times a day, and the recovery of the patient was rapid indeed. While taking this preparation a second examination was made on the 29th of March, showing hemoglobin 74 per cent., and red corpuscles 3,820,000. Another examination was made April 7th, giving hemoglobin at 80 per cent., and red corpuscles 4,260,000. A final examination April 20th, hemoglobin 90 per cent., red corpuscles 4,850,000.

CASE 2.—Effie S., aged 24. A case of simple anemia, was admitted to the hospital in April. The following blood counts were made; marked improvement on administration of Gude's

Pepto-Mangan three or four times daily. First count April 14th, 1899: hemoglobin 33 per cent., red corpuscles 2,160,000. Second count May 5th: hemoglobin 39 per cent., red corpuscles 2,560,000. Third count January 19th: hemoglobin 72 per cent., red corpuscles 4,360,000.

CASE 3.—O. C., aged 20. Was admitted to Toronto General Hospital suffering as the result of severe hemoptysis, followed by marked anemia. First count March 24th, 1899: hemoglobin 47 per cent., red corpuscles 2,800,000. Pepto-Mangan was administered. Second count shortly before leaving the hospital: hemoglobin 65 per cent., red corpuscles 3,800,000.

CASE 4.—E. W., aged 22. Seen at the Toronto Dispensary, suffering from simple anemia. Pepto-Mangan was administered, drachm doses, four times daily for three months. When first prescribed the hemoglobin was 45 per cent., red corpuscles 2,800,000. Second count April 21st: hemoglobin 60 per cent., red corpuscles 3,448,000 corpuscles. Fourth count June 10th: hemoglobin 69 per cent., red corpuscles 4,230,000.

CASE 5.—Mrs. C. was admitted to the Toronto General Hospital, suffering from anemia. The first blood count was made June 19th, 1899: hemoglobin 47 per cent., red corpuscles 2,812,000 c.m. Gude's Pepto-Mangan was prescribed in teaspoonful doses three times daily. Second count was made July 14th, showed hemoglobin 66 per cent., red corpuscles 3,900,000.

CASE 6.—A. H., suffering from amenorrhea, with marked anemia and hemic murmur. First blood count June 19th, 1899: hemoglobin 58 per cent., red corpuscles 2,904,000. Second count July 14th: hemoglobin 64 per cent., red corpuscles 3,750,000. She left the hospital shortly afterward fully restored to health.

CASE 7.—C. M., Chinaman. Admitted to the hospital suffering from chronic nephritis with marked albuminuria. First count March 25th, 1899: red corpuscles 3,340,000. Second count May 15th: red blood corpuscles 4,201,000. His general condition improved greatly with reduction in the quantity of albumen.

CASE 8.—E. H., aged 26. Suffered greatly from insomnia and anemic headaches. Pepto-Mangan (Gude) was prescribed on March 20th, when the first count was made. This showed hemoglobin 45 per cent., red corpuscles 2,420,000. Second count April 21st: hemoglobin 65 per cent., red corpuscles 3,615,000.

CASE 9.—Mrs. E., aged 29. Mother of two children, suffering from laceration of the cervix, accompanied by a profuse leucorrhea and with the following blood counts: hemoglobin 50 per cent., red corpuscles 2,900,000, March 20th, 1899. Second count, April 30th: hemoglobin 61 per cent., red corpuscles 3,700,000.

In addition to giving Gude's Pepto-Mangan, two-drachm doses, local treatment was adopted with marked improvement.

CASE 10.—Mrs. L. Recently married, of a highly neurotic temperament, anemic and suffering from acute simple vaginitis. Was given Pepto-Mangan (Gude), two-drachm doses, four times daily in addition to local treatment. After six weeks' administration of the preparation her general health was very much restored, and the headaches from which she had suffered were relieved. There were no blood counts made in this case. The results appeared to be quite as satisfactory in improving the condition of the blood as in those previously reported.

OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES F. W. ROSS, ALBERT A. MACDONALD,
H. C. SCADDING AND K. C. MCILWRAITH.

Acetonuria and Death of the Fetus.

Convelaire (*Arch. de Gynecol.*) has investigated the claim of Vicarelli that acetone occurs in women with retention of dead fetus in utero, and has come to the conclusion that the dead fetus cannot by itself determine this condition. He agrees with Mercier and Menu that acetonuria in a pregnant woman is not a sign of death of the fetus.

The Vomiting of Pregnancy.

Dr. John P. Dow (*Massachusetts Med. Jour.*, August, 1899,) says that in mild cases of the vomiting of pregnancy, when medication is not desirable or feasible, he is very fond of following an old German custom. He advises the patient to take a small cup of strong coffee upon waking in the morning—best without sugar and cream—then to remain quietly in bed for an hour before getting up.—*N. Y. Med. Jour.*

Golden Rules of Obstetric Practice.

Do not be unduly hopeful if a tubercular patient seems to improve during pregnancy. She will probably lose ground rapidly when gestation is ended.

Improvement in the later manifestations of syphilis is often observed during pregnancy. But it does not indicate that treatment may be neglected.

If albumen appears in the urine for the first time during pregnancy, be prepared for eclampsia. Where chronic renal disease is known to exist there need be less fear of this complication, though the disease is aggravated by pregnancy.

FOTHERGILL.

Blood Examination in Gynecology.

W. R. Griess (*Amer. Jour. Obst.*, xl., 226, August, 1899) emphasizes the value of a leucocyte count in certain gynecological affections. A leucocytosis of 10,000 per cubic millimetre or more in a woman with pelvic pain, after all acute symptoms have subsided, is (eliminating diseased conditions of the blood and of other organs by examination and history) strongly indicative of suppuration of some of the pelvic organs. In the diagnosis between typhoid fever and pus tubes leucocytosis determines that it is the latter.—*Epitome, Brit. Med. Jour.*

Unguentum Cr   in the Treatment of Pelvic Exudate.

Dr. John O. Polak said at a meeting of the Brooklyn Gynecological Society: I have recently been using unguentum Cr   in several cases of pelvic exudate with the most happy results. It is surprising how it reduced the temperature and diminished the exudate. In one of the cases the exudate reached to the umbilicus, and the temperature was 102   to 103   F. There did not seem to be much toxemia present, and the case was one of those in which we usually prescribe rest in bed and laxatives. In two post-operative cases in which there was a temperature of 100   to 101   F. even after drainage was established, the ointment seemed to have a good effect upon the general condition of the patient in addition to controlling the temperature and reducing the size of the exudate. It is extremely good in cellulitis, and I believe that one man, a Dr. Jones, of New York, has had the courage to use it in a case of puerperal sepsis with no other treatment. I am so well satisfied with the results obtained from the use of this ointment that I wish to call your attention to it in this preliminary report of my cases.—*Brooklyn Med. Jour.*

Eclampsia.

Bayer (*Monats. f. Geburt. u. Gyn.*, July) says that his series of fifty cases of eclampsia well illustrated the tendency of the very ill to unexpectedly recover now and then, while the mild cases occasionally terminated with sudden fatality. Albuminuria was invariably present, with or without oliguria (anuria). Upon section the usual renal lesions and necrosis of the liver were prominent. In every one of his fifty cases the vertex presented, even in the six cases of twins; this finding appears to harmonize with L  hlein's pressure theory of eclampsia; in no case, however, did autopsy reveal any urethral lesion. Bayer states that eclampsia is quasi-epidemic in the spring and fall because of the weather influences then predominant, which tend to cause nephritis. He was unable to find any suspicious

micro-organisms, although germ-life as a general rule was abundant enough in blood, urine, etc. He adds nothing new to the treatment, and concludes by stating that the mortality from eclampsia is still fearful, but that each new series of reported cases may add something to our knowledge of and ability to control the disease, even though the contributor himself may not understand the value of this work.

The Decadence of Anti-Streptococcic Serum.

It now seems quite settled that Marmorek's serum, the anti-streptococcic serum that we had all hoped would give direct control of the germs of puerperal sepsis, is a failure. Before the Société Obstétricale de France, Macé reported in April adversely to its use, and stated that its employment was rapidly being abandoned.

His views were endorsed by others present. The dissatisfaction of the Institute Pasteur was likewise mentioned, which, in itself, is the most deadly blow the remedy(?) has received. The report of the committee of the American Gynecological Society at its recent meeting was distinctly adverse.

A large majority of cases of puerperal sepsis are of mixed infection, and it was scarcely to be expected that a serum whose potentiality was limited (in theory) to the destruction of but one germ, the streptococcus, would prove successful.

Denise, of Tourain, allows for at least fifteen varieties of bacteria in the production of puerperal sepsis. He has prepared a serum with which sufficiently good results have been obtained to lead to further experimentation.

Because of the failure of Marmorek's serum, we need not fear that serum therapy in this disease is unavailable. A successful serum will yet surely be discovered.—Extract from Editorial in *Obstetrics*.

Surgical Treatment of Uterine Fibromyomata.

At the recent meeting of the International Congress of Gynecology and Obstetrics, E. Doyen, of Paris, in a paper on this subject, reaches the following conclusions:

1. The surgical treatment of fibromyomata should consist in their ablation.
2. The bilateral extirpation of the annexa by laparotomy has been generally abandoned, and is indicated only as a complement to ovariectomy when uterine fibromata exist without causing serious symptoms.
3. Fibromata should be ablated by the vagina when operation by that route is easy.
4. Laparotomy is preferable when the vaginal operation seems to present real difficulties.

5. Vaginal myomectomy and hysterectomy should be performed by simple or V-shaped anterior median section of the uterus.

6. Large interstitial tumors are scooped out by the cutting-tube (tube tranchant) and extirpated by morcellation in "lozenges."

7. The ablation of large pedunculated fibromata by laparotomy presents its special indications. Abdominal myomectomy is only rarely indicated.

8. The operation of choice for multiple and large interstitial fibromata is total abdominal hysterectomy by subserous decortication of the inferior segment of the uterus, with closure of the pelvic peritoneum.

Differential Diagnosis of Pelvic Peritonitis and Pelvic Cellulitis.

Ely Van de Warker, in the *American Gynecological and Obstetrical Journal* for March, 1899, gives the following differentiating points:

PELVIC PERITONITIS.

Following labor or abortion in a few days.
Beginning in a rigor.
Severe fever, face pinched, prostration.
Pain acute, sharp.

Great tenderness of abdomen.
Tumor generally behind pubis.
Tumor, as a rule, not above pelvic brim.
In early stage more evident in vaginal cul-de-sac.
Suppuration rare.

Purulent pelvic peritonitis attended with symptoms of peritonitis.
Purulent mass, intra-abdominal.
Pus confined.
Pus tends towards viscera, or encysted.

No retraction of thigh.
When mass extends into the iliac fossa it is not well defined.
Tumor elastic or fluctuating.
Always uterine displacement with per-uterine mass.
Never involves abdominal wall.
Relapses from slight causes frequent.
Sometimes an intestinal percussion note over mass.
Never extends to vaginal wall.

Often associated with specific infection of vagina.
Occurring without lesion of genitalia.
Pain always intrapelvic.

Phlebitis not observed.

PELVIC CELLULITIS.

Eighteen to twenty days after.
No rigor (Bernutz).
Less fever, no facial or general reaction.
Pain dull, throbbing-like, beginning abscess.

Lesser tenderness.
Tumor usually in iliac fossa.
Tumor at or above brim.
In early stage less evident in cul-de-sac.

Suppuration very frequent in phlegmons (Bernutz).
No symptoms of peritonitis.

Purulent mass in iliac fossa, subperitoneal.
Pus often diffused and burrowing.
Pus tends toward abdominal wall or deep iliac fossa.
Retraction of thigh.
In cellulitis always well defined.

Tumor more solid.
May be absent with very large pelvic mass.
Often involves abdominal wall.
Relapses rare.
Dull on percussion.

Extension of cellulitis from broad ligament or iliac fossa into vaginal wall.
Usually no specific infection.

Often following lesion.
In addition, pain in anterior and inner side of thigh to leg and foot.
Phlebitis an occasional complication.

—*Medicine.*

Repair of Injuries of the Pelvic Floor.

Charles Jewett, M.D.

For some time most of the extensive pelvic-floor injuries in my service at the Long Island College Hospital have been repaired at intervals of one or two days to a week or more

after labor. This was necessitated in many instances by the fact that the women were not admitted till after labor. Late suturing proved so satisfactory in these cases that it was adopted for practically all extensive lacerations. Granulating wounds were found to unite perfectly when closed without vivifying at any time before they began to cicatrize. In patients becoming septic union very rarely occurs, even under immediate suturing. The advantages of late repair in severe injuries are several. The character of the injury is better defined, the work is not obscured by the bloody flow from the uterus, a good light, plenty of help, and ample preparation are possible. Thus the work is more exact and complete, and restoration of the parts to their primal condition in nearly all cases results. When the wounds are repaired at the close of labor, often in insufficient light, at the time when the structures are more or less disturbed from their normal relations and the preparation inadequate, perfect restoration fails in a considerable proportion of cases.

The objections to late repair are that the patient is, perhaps, subjected to a second anesthesia, and that she is kept somewhat longer in bed. But these considerations are of minor importance.

The technique is substantially the same as that adopted by Emmet in the secondary operation, and in injuries not involving the sphincter is as follows:

Normally the posterior rests against the anterior vaginal wall. The centre point of its lower end falls just below the meatus. Catching the posterior wall with a volsella at its centre point close to the wound-surface, its lower extremity is held up against the anterior wall immediately behind the meatus. Thus a trough-shaped tear is developed, running up one or each sulcus as the case may be. The gutter-shaped wound is closed with interrupted sutures, introduced from the vaginal surface. Beginning at the upper angle of the tear they are applied in succession from above downward nearly to the skin surface. The other sulcus if torn is treated in like manner. The sutures are so laid that the loop or bight of each is nearer to the operator than the points of entrance and emergence. The plane of each is oblique to the suture line. This has the effect, as the sutures are tied, to draw upward the sagging pelvic floor. The sutures are tied as fast as placed. A shallow wound of little more than skin depth now remains on the perineal surface. This is best closed with interrupted sutures introduced from the skin side. The entire length of the suture-line is carefully examined, and at every gaping point, on skin or mucous membrane, a superficial suture is applied. The skin-sutures are subject to very little strain. The vaginal sutures

rest on structures much less sensitive than the skin, and the woman thus experiences comparatively little discomfort from the stitches. The anatomical relations are restored *ad integrum*, which is scarcely possible, except in superficial lacerations, when the suturing is done from the skin-surface. Notwithstanding the risk of infecting the wound by passing the finger into the bowel it is scarcely possible otherwise to guard against occasionally carrying the needle into the rectum. When in doubt I introduce the little finger of the left hand into the bowel as the needle is passed. This finger is rinsed frequently in the antiseptic solution, and is kept from contact with the wound and the sutures.

The suture material which has given the most satisfactory results is silkworm gut. The ends are left of full length, and at the close of the operation they are bundled and tied together and enveloped in cheesecloth to prevent irritation from friction. The nurse changes the dressing as required. Stitches of silkworm gut, if properly applied, may be left from fourteen to seventeen days. No suppuration occurs, and, with the exception of, perhaps, a slight lochial discharge, and the natural secretion, the suture-line will at the end of that time be found dry. It is, of course, necessary that the stitches be not tight. To make allowance for swelling I usually leave them so that if drawn up after tying, the pointed ends of a hemostatic forceps can be passed beneath the lifted portion of the loop.—*Brooklyn Medical Journal, Brooklyn Gynecological Society.*

[For several years in the Burnside Lying-in Hospital we have waited until the second or third day after labor before repairing injuries to the pelvic floor, with very satisfactory results, *i.e.*, the operations have been better performed and have less frequently been followed by sepsis.]

LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

Acute Septic Rhinitis of Childhood.

Lewis P. Somers (*Laryngoscope*, September, 1899). In adopting Tissier's classification of rhinitis of childhood, into simple, membranous and septic, Somers records a case of the latter. It occurred in a boy aged four years. There was a history of purulent discharge from both nostrils of only a few days' duration, accompanied by stuffiness of the nose and development of vesicles of the nares and upper lip. The vestibules were lined with little pustules, and the discharges were very irritating, consisting of yellow pus. The epithelial lining of the septum

as well as middle and inferior turbinals was necrosed and of a white color, in contrast to the adjacent inflamed areas. There was effusion of serum into the deeper tissue layers; and the mucous membrane of the floor and dependent portion of the turbinals presented a boggy appearance. The destruction of tissue was considerable, and phlyctenular conjunctivitis was well marked, arising, no doubt, from the nasal inflammation. Constitutional symptoms were almost absent, the temperature being only slightly above the normal.

The treatment consisted of antiseptic alkaline sprays, followed by dilute solution of peroxide of hydrogen, each repeated two or three times a day. The treatment was continued for about two weeks, by which time the affection had disappeared.

The Rhinitis of Inherited Syphilis.

St. Clair Thomson (*Jour. of Lar., Rhin. and Otol.*, August, 1899). Inherited syphilis, as a rule, makes its first appearance a few weeks after birth. The symptoms are usually secondary. The snuffles and chronic coryza are very characteristic. Later on, at the age of four or five years, or upwards, the symptoms indicate somewhat indefinitely the tertiary stage.

The history of a case occurring in a little girl is given. At the age of six years the mucous discharge from the nostrils was bluish, and the bridge of the nose was becoming depressed. The temporary teeth were all present and nothing amiss was noticed with them. Eighteen months later she was again observed, and St. Clair Thomson describes her condition as follows:

"She was seven years and nine months old. She had during the interval shed her temporary upper incisor and canine teeth. These had been replaced only by the two central incisors. These latter presented incontestable evidence of congenital syphilis, and are typical of Hutchinson's teeth. The characteristic peculiarities are that they are dwarfed; the portion of the upper jaw from which they grow is stunted in its development, giving a certain 'underhung' appearance. The two incisors stand somewhat apart, and slope away from one another; they are unusually rounded, instead of being quadrilateral; they are larger near the gum than at the free edge ('pegged'), and they are notched. This notch occupies the centre of the edge; it is deeper and wider in the centre, and is shallower and narrower as it approaches the lateral borders. The dentine is exposed at the bottom of it."

The Offending Middle Turbinal.

Edwin Pyncheon (*Laryngoscope*, September, 1899). In this article there is a comprehensive *résumé* of our knowledge

concerning hypertrophy of the middle turbinated body, with an expression of the views of leading authors upon the subject. Anterior enlargement is frequently simply an overgrowth, and but for the fact that it occurs in a confined space, resulting in pressure upon healthy tissues, would of itself lead to no bad results. To do its physiological work properly a clear space, however narrow, is required between the middle turbinal and the septum. When there is much enlargement, occlusion of the superior meatus and attic may occur, as well as obstruction of the middle meatus and ostium maxillare. Free nasal respiration being impeded, the secretions in the naso-pharynx lose their normal character, and postrhinal catarrh is the result.

Headache is often caused by pressure of the middle turbinal upon the septum. When the enlargement is of a soft non-osseous character, the headache is likely to be transient, subsiding as the engorgement is temporarily relieved. When the pressure is constant, from firm or osseous thickening, the headache likewise is likely to be continuous. Any headache caused by one-sided turbinal pressure is usually unilateral.

Other results of a reflex character are hay-fever, asthma, pharyngitis sicca, etc.

In treatment, partial turbinectomy is advised; and Pyncheon advocates the use of a guarded trephine.

Nasal Disease as a Cause of Headache.

Dundas Grant (*Jour. Lar., Rhin. and Otol.*, September, 1899). In speaking upon this subject, the writer says: "As regards the forms of nasal disease which may give rise to headache, the most common may be first quoted, namely, adenoid vegetations in the naso-pharynx. It is a most usual experience after the removal of adenoids to observe the disappearance of headaches which were previously of frequent occurrence.

"Hypertrophy of the middle turbinated is another frequent cause, and that it should be so is very readily understood, when we consider the comparative narrowness of the space in which it lies, and the rigidity of the walls which bound that space, all being richly supplied by branches of the great sensory fifth nerve."

The Importance of Septa and Pockets in the Antrum of Highmore with Reference to Operation.

John O. Roe (*Jour. Lar., Rhin. and Otol.*, September, 1899.) Four features should always be taken into consideration with reference to operation: (1) The position of the sinus; (2) Its size, shape and conformation; (3) The thickness of its walls; (4) Its relation to the roots of the teeth. He also believed in

using an antrum searcher, which he had invented. This consisted of a flexible wire spring with probe point. It ran in a cannula, and could be extended from the latter after it had passed into the antrum. In this way it was possible to get a very accurate idea of the interior of the cavity, even through a very small opening.

Cyst of the Epiglottis.

H. D. Hamilton (*Montreal Medical Journal*, August, 1899). A youth of eighteen had dysphagia, nasal voice, snoring and cough; and required to make what he called a "right turn" of his head in swallowing. On depressing the tongue a bladder-like mass, as large as a hen's egg, was seen to fill the lower part of pharynx, particularly on right side. Laryngeal examination proved it to be attached to upper and right side of epiglottis.

The treatment consisted of evacuating the pale-green gelatinous contents, and injecting a few drops of a 5 per cent. solution of carbolic acid in glycerine and water. The fluid reformed in lesser quantity, and week by week the evacuation was repeated and the injection increased in strength. Four weeks from the commencement of treatment an attack of tonsillitis supervened, after which the cyst wall was lifted out in a sloughing mass. This was followed by complete healing, leaving a flattened surface. There was no return.

Graves' Disease, with Report of the Successful Treatment of a Case.

Robinson Cox (*Maritime Medical News*, September, 1899.) In this case the patient was a lady, aged 29, married, and the mother of one child, aged fifteen months. The goitre and the exophthalmos were both prominent; pulse 135 per minute; great prostration and loss of appetite; on the slightest exertion perspirations were profuse.

In treatment arterial sedatives, iodide of potassium, hydrochloric acid and thyroid extract were all tried faithfully, without avail. The pulse by this time was 140 per minute. Then on recommendation of W. S. Muir, of Truro, the patient was put upon salicylate of bismuth combined with salol, together with an occasional mercurial purge. The diet consisted of milk and eggs almost exclusively, no meat of any kind, or fruit or vegetables being given. Absolute rest in bed was enjoined. In six weeks there was marked improvement in every way, with pulse reduced to 100 per minute. In four months she was able to be up without injurious effect. Improvement continued, and a few months later exophthalmos was gone; thyroid enlargement not noticeable; and pulse reduced to 82 per minute.

Report of a Case of Laryngeal Chorea of Reflex Origin.

J. A. Stucky (*Ann. of Otol., Rhin. and Lar.*, August, 1899) gives the history of this peculiar case. The patient was an unmarried woman, aged 23. Menstruation had commenced at the age of twelve. This function remained normal for several years. Subsequently she became an invalid, suffering severely from dysmenorrhea, to relieve which both ovaries were finally removed.

At the time she came under Stucky's care she had been troubled with a peculiar barking or yelping cough, which had lasted for four or five years. The convulsive seizures were frequent and prolonged, and were always aggravated by the recumbent posture. Sleep did not prevent the cough unless the patient was narcotized. The hoarse yelping was very aggravating to herself and others, and was accompanied with chronic twitchings of the throat.

A round of rest and medication was tried, ineffectually. Finally it was discovered that a spray of 10 per cent. solution of cocaine thrown into the nasal passages would give almost immediate relief; and, on examination, it was observed that the inferior turbinates were hypertrophied from one end to the other.

Two applications of chromic acid were made to both inferior turbinates throughout their length, the interval between applications being two weeks. The result was excellent, with entire relief from the symptoms.

Hysterical Aphonia Lasting for Eleven Years.

Lennox Browne (*Jour. Lar., Rhin. and Otol.*, June, 1899). After a severe mental shock, the patient, a woman, became suddenly mute, and continued so for three or four years. She then commenced to whisper. After three or four years more a deep, rough voice was developed by vibration of the ventricular bands, as seen by the laryngoscope. Different methods of treatment were tried without avail. Finally, after exposure to intense excitement, the voice suddenly returned and remained normal ever afterwards.

Laryngeal Paralysis.

G. T. Ross (*Canada Medical Record*, July, 1899). In a lecture on "Laryngeal Paralysis," the writer gives the history of an interesting case occurring in a man, age not given. The patient had lived for years in poverty combined with chronic alcoholism. Family history: Tubercular; nose, naso-pharynx and pharynx in a chronic catarrhal condition; epiglottis, ary-epiglottic folds and arytenoids likewise suffering from chronic irritation; vocal cords of a brownish-red color, and partially

overlapped by the ventricular bands. The anterior half of the vocal cords had lost their mobility, leaving the anterior commissure open during phonation; while in the posterior half abduction and adduction were normal. The position of the cords was like that found when falsetto notes are produced, the glottis being tightly closed behind but gaping wide in front. It also somewhat resembled the position of the cords in the so-called abdominal notes produced by the ventriloquist. There were no tabetic symptoms; but the man had complained of aphonia for three and a half years. The case was an unusual one, being paralysis of the adductors of the anterior half of the vocal cords.

HYGIENE.

IN CHARGE OF WM. OLDRIGHT, M.A., M.D.

The Prevention of Tuberculosis.

In a paper read at the National Conference of Charities and Correction in Cincinnati, May 18th, 1899, Dr. George F. Keene, of Howard, R.I., gives some startling statistics and some forceful remarks—none too forcible, however, on the above subject. We give a few extracts:

"This is a disease which has claimed more victims than all the wars and all the plagues and scourges of the human race. Even during the few short years since Koch's discovery, over 2,000,000 persons on this continent have succumbed to its fatal infection. In the last two decades right in Cincinnati, out of a total mortality of 119,089, there have been 17,353 deaths from this dread disease. The annual tribute of the United States to this scourge is 100,000 of its inhabitants. Each year the world yields up 1,095,000; each day, 300; each minute, two of its people as a sacrifice to this plague. Of the 70,000,000 individuals now peopling these United States, 10,000,000 must inevitably die of this disease if the present ratio is kept up. It is confined to no race, it is limited to no country, but it is ubiquitous and universal.

"When we realize that the best time to deal with this disease, as with any other, in fact, is before we get it; when we realize that sanitation applied by the public and for the public, is mightier in results than scientific medication in the most skilled hands of individual cases; when we realize that the life of each individual citizen is a public responsibility and his untimely death a public misfortune—we will be ready to enter a public crusade against this scourge; and it is only by such a crusade that tuberculosis can be held in check.

"The people must be taught that the chief agent of con-

tamination in the human family is the sputum. It has been estimated that a patient in whom this disease is but moderately advanced, throws off from his lungs by expectoration four and a third billions of the germs of this disease every twenty-four hours. Dry expectoration soon becomes dust, and dust which the wind 'bloweth where it listeth.' Tubercle bacilli in dust have been shown by Dr. Stone, of Boston, to retain some of their virulence for at least three years.

"The cure of this disease has almost been a forlorn hope for ages. We know, however, that not a few have recovered completely from tuberculosis, as every pathologist can testify, for he has indisputable evidence of the fact in the cicatrized lungs he has seen, showing that they have healed after partial disintegration from the disease. Cure of this disease has been due to fresh air and a generous diet sometimes, perhaps, in spite of treatment. Consumption is an indoor disease. Where sunlight and pure air are bountifully enjoyed, there tuberculosis can find but little lodgment.

"Let every means be employed to stimulate public charity. Let societies be organized everywhere for the prevention of this scourge and to encourage philanthropic bequests for the building of sanatoria, for charity must be the ally of education in this great struggle. Let us, then, bear constantly in mind that it is no small part of our mission to save the individual from himself and the contamination of others; to institute and accomplish that bodily regeneration so vital to reforms; to preach everywhere the gospel of cleanliness, so essential in good morals; to drive contagion out that seeks consort with vice, ever remembering that we must be surveyors of the highway of health as well as pilots in the storm of disease."

Sewers and Health.

In the *Commercial-Appeal* (Memphis, Tenn., July 30th, 1899), we find some new statistics on this subject. Such statistics, when reliable, are always a valuable addition to our stock of knowledge :

The Board of Health last year kept tab on its health reports and located the principal diseases to the districts and wards from which they were reported.

There were only two districts, so far as Dr. Jones, the health officer, was concerned. The sewered district offered one, and the unsewered district offered the other. Whenever a case of scarlet fever, diphtheria or typhoid was reported, it was duly recorded, and if it was in the sewered district it was so stated, and in the unsewered district it was so recorded.

The result is startling. It offers a percentage that will astonish even those who have most strongly advocated the sewer system.

There were differences in population to be considered, too, and the sewer and sanitary census shows that in the sewered district the population was five times that of the population in the unsewered district. This is a fact to be borne most prominently in mind in considering the result, that the sewered district outnumbered the unsewered district five to one, offering 80 per cent. more population in which sickness might spread, and yet the following results are shown :

In the sewered district, with its great population, there were reported, in 1898, twenty-eight cases of diphtheria, while in the unsewered district, with only 20 per cent. of the population, there were thirty-eight cases, showing an increased difference of ten cases.

In the unsewered district, with its small population, there were reported during the year forty cases of scarlet fever, while in the sewered district, with five times the population, there were only twenty-four cases, very nearly a 50 per cent. reduction, with every reason, in point of numbers, why the percentage should have been reversed.

There were twenty-three deaths from typhoid fever, thirteen of the fatalities occurring in the place they were first reported from in the unsewered district. Six cases were reported from the sewered district and four cases died in the city hospital, having been carried there from the annexed territory, showing really that seventeen of the fatalities from typhoid occurred in the unsewered district and only six in the sewered district.

The report on cases of malaria was not kept up, but the physicians of the city can judge best where they visited the most cases. Dr. Jones says that the record, had it been kept, would have offered still more convincing proof of the efficiency of the sewer system in promoting good health.

These facts are correctly arrived at because the Board of Health was anxious to ascertain what was the direct benefit to be derived from sewers, and the result has been more than satisfactory.

Dr. Jones says he is going to show next year, when the sewerage system of Greater Memphis is nearly completed, other facts of interest, and he expects to see a decrease in the death rate of $33\frac{1}{2}$ per cent., or very nearly that, and will compare the death rate of 1900 with years in the past.

Lead Poisoning from Water Pipes.

At the present time the State Board of Health of Massachusetts and the local Board of Milford are engaged in a discussion of alleged cases of lead poisoning, arising, as is alleged, from a certain excess of carbon dioxide in the water supply. Some difference of opinion exists as to the number and nature of the cases and the causes of it.

Mosquitoes and Malaria.

The Italian observers, Grassi, Bastinelli, and Bignami, who are associated in carrying out a series of investigations at the hospital of Santo Spirito, with the object of throwing light upon the etiology of malarial fever, have again met with success in their inoculation experiments with mosquitoes. On this occasion only one species of these insects was employed in the experiment, namely, *Anopheles claviger*, captured as before in the adult stage in the malarious region about Maccarese. The subject of the experiment was a young man who had never suffered from malarial fever, and who was received into the hospital of Santo Spirito for hysteria about four years ago, during which time he has been constantly under observation, and has had no kind of fever whatever. This man for nineteen days slept in a room in which were set at liberty from time to time numerous specimens of *Anopheles claviger*. On December 2nd (eighteenth day) he began to feel unwell, and on December 3rd the blood, on examination, was found to contain the parasites of malarial fever, exclusively of the common tertiary type (the spring tertian of Italian writers). This form of fever is prevalent at Maccarese. Considerable difficulty is experienced in continuing these experiments on account of many of the mosquitoes dying and others refusing to feed. This is probably due to the lateness of the season.—*Scientific American* (Supplement.)

Editorials.

THE CARE OF LUNATICS AND INEBRIATES.

It is a sad if not a disgraceful thing to have an unfortunate lunatic confined in a common gaol. A large deputation from the Prisoners' Aid Association had an interview with the Hon. G. W. Ross and Hon. E. J. Davis during the past summer, and gave expression to certain opinions on the treatment of lunatics and inebriates. It was stated that there were 208 prisoners in the Toronto Gaol on February 16th; and of these, 30 were vagrants, 28 were lunatics, while 35 were incarcerated for drunkenness. The whole number far exceeded the normal capacity of the gaol, and prevented a proper classification of the prisoners. It was recommended that all the insane, or at least those who have been in gaol over two months, be removed to an asylum, and that those who were imprisoned for drunkenness be sent to a reformatory, a special hospital, or a special department of a general hospital, where they could receive scientific treatment.

Dr. Oldright, speaking on behalf of the Inebriety Committee of the Ontario Medical Association, said that inebriates, or at least a certain proportion of them, require special treatment almost, if not quite, as much as the insane. In the same connection he referred to the Massachusetts Hospital for Inebriates—a State institution, where over 42 per cent. of those discharged are reformed. Dr. Roe, of Georgetown, and several laymen spoke in the same strain.

It is of course unnecessary to add any arguments to those already brought forward, or even to say anything special in the way of supporting them, because the profession of the Province, probably without exception, fully agree with the views expressed at the meeting. The chief point of interest now is to learn the views of the Government on the subject. We believe the members of the delegation were well pleased with the replies of the ministers.

The Hon. Mr. Davis admitted that the insane were detained in gaol longer than they should be, but that the condition in that respect would be improved when the new addition to the

Brockville Asylum was completed. With reference to inebriates, he hoped the general hospitals would take the initiative and test the effects of the proposed treatment. The Hon. Dr. Ross announced that the removal of the boys from the Penetanguishene reformatory to a new institution in Oxford County would make that building available for the reception of some of the lunatics. He also supported Mr. Davis's view as to the initiative being taken by the general hospitals in the treatment of inebriates.

THE TORONTO GENERAL HOSPITAL TRAINING SCHOOL FOR NURSES.

The graduating exercises of this excellent training school for nurses, on Friday evening, October 20th, were very interesting. Certificates and medals were presented to the large graduating class of seventeen. The most important feature, as far as the school is concerned, was the fact that this is the first class that has completed the "three years' course" which was inaugurated in 1896.

The course of study was then increased from two to three years, partly because it had been done in Great Britain, and in one of the nursing schools in the United States, but chiefly because it was thought that a great improvement in the character of the instruction would ensue, and that the nurses would acquire more accurate knowledge and practical skill.

The working of the school during the last three years has been watched with great interest, and the results of the recent examination were studied with considerable care. As a result we can say without any doubt that there is now a general consensus of opinion that the change has increased the efficiency of the school, and it is altogether unlikely that any one will in the future recommend a return to the old system.

We notice in the *Globe* a word of warning given in a friendly way, to the effect that a well-trained nurse should be thoughtful and considerate to all parties living in a house, especially towards the mistress, and avoid making extra work for the servants and others. We quite agree with "Chit Chat," although we hope that such a note of warning is scarcely needed

by recent graduates if they bear in mind the hints they get on this subject from their teachers. However, much depends on the make-up of the nurse. If she has neither tact nor common sense, no teaching staff can make her a good nurse. The chief aim of the superintendent is to select only the right sort, but that task is sometimes a very difficult one.

THE TREATMENT OF DIPHTHERIA.

Dr. Peter H. Bryce, Secretary of the Provincial Board of Health, has sent a circular letter to the chairman and members of each Board of Health in Ontario, dealing with that very important subject—the treatment of diphtheria. He calls attention to the Annual Report for 1898 of the Metropolitan Asylums Board Hospitals of London, England, and shows the difference in the mortality rates since 1895, when the treatment by antitoxin was commenced. The effect of the change has been to reduce the mortality rate from 30 to 18 per cent.

There are, however, other important considerations in addition to decreased mortality rate, the chief one being the influence of antitoxin in the occurrence and course of diphtheritic paralysis. An analysis of the results shows that early injections of antitoxin diminishes very materially the tendency to paralysis. Dr. Bryce desires to convey the idea to all boards of health and all physicians that the *early* injection of antitoxin is the proper method of treatment to all cases of diphtheria.

Personals.

Dr. Jas. F. W. Ross left Toronto for St. Clair Flats, October 12th, for duck shooting.

Dr. Algernon Temple, of Toronto, left for Bothwell, October 15th, for a week's quail shooting.

Drs. Allen Baines and Crawford Scadding returned to Toronto, October 8th, after a visit to New York.

Dr. L. Sweetnam returned to Toronto, October 11th, after spending a couple of weeks in travelling, mostly in canoe, through Algonquin Park.

Dr. Norman E. Farewell (Trin. '98), of Oshawa, one of the house staff, Toronto General Hospital, has been appointed Medical Superintendent of the Protestant Hospital of Ottawa.

The Detroit Academy of Medicine held its annual meeting October 10th, and elected the following officers: Dr. George Duffield, President; Dr. L. E. Maire, Vice-President; and Dr. H. D. Jenks, Secretary.

Mr. Archie Anderson, a student of Trinity Medical College, has gone away with the African contingent. His fellow-students presented him with a beautiful silver-mounted pipe and tobacco-case, engraved with the words, "Trinity Meds., '99, as a token of esteem."

Mr. J. Jordan, otherwise known as Corporal Jordan, a senior student in the Medical Faculty of the University of Toronto, has left Canada with the African contingent. His fellow-students presented him with a gold watch and a purse containing twenty gold dollars. The presentation was made in the Biological Department of the University on the afternoon of October 24th, the day before the departure of the "Toronto Unit."

Obituary.

DR. WILLIAM COMFORT.

Dr. Comfort, of North Pelham, died October 23rd, 1899. He was in his seventy-eighth year, and was one of the oldest practitioners of the Niagara Peninsula, and an able and respected physician. Cardiac syncope is given as the immediate cause of death.

DR. JOHN HYNDMAN.

Dr. Hyndman, of Exeter, died October 5th, 1899, after an illness of but a few days. Heart failure is given as the cause of death. He became a licentiate of the old Medical Board of Upper Canada in 1851, and practised in Exeter for more than forty years. He was a good citizen, a good doctor, a good Tory, and was highly respected by the inhabitants of Huron and adjacent counties.

DR. JAMES B. CAMPBELL.

Dr. J. B. Campbell, of London, Ont., died at his home, October 12th, aged 56. He was born in Yarmouth Township, Elgin County. After completing his course in medicine, he passed the final examination of the Ontario Medical Council, and obtained a license to practise in 1875. He then commenced practice in the village of Belmont, where he remained until 1887, when he removed to London. He soon built up a large practice, and, in addition, took much interest in educational matters. He was a member of the Educational Board of London for nine years, and one year its chairman.

Book Reviews.

The Nervous System and Its Constituent Neurons. Designed for the use of Practitioners of Medicine and of Students of Medicine and Psychology. By LEWELLYS F. BARKER, M.B. (Tor.), Associate Professor of Anatomy in the Johns Hopkins University, and Assistant Resident Pathologist to the Johns Hopkins Hospital. With two colored plates and 676 illustrations in the text. New York: D. Appleton & Co. Toronto: Geo. N. Morang & Co. 1899.

It has been known for some time that Dr. Barker was engaged upon a work on the nervous system, and it was presumed that it would be constructed along the lines of anatomical and pathological research. The work is now before us, and contains 1,122 pages. This is certainly a large treatise on any subject, and it behooves the author, who claims the reader's attention to so large a work, to have something valuable to say, either as original matter, or as a careful review of the state of knowledge to the date of writing. In Dr. Barker's book we have both requirements fulfilled in a very remarkable manner. In a work so large, it is difficult to apportion that which is really original with the author and that which is compiled and arranged from many sources. It must also be remembered that a certain statement may not be original, and yet much original research be expended upon it in order to prove its correctness. We have here a great work on the histology of the nervous system, which is intended as a sure foundation from which its pathology must be studied.

During the past ten years an immense amount of study has been devoted to the minute anatomy of the nervous system. As the result of these studies our views have undergone many and important changes. The first of these epoch-making studies was made by Ramon y Cajal, of Barcelona, Kolliker and Waldeyer. It was Waldeyer who introduced the term neuron; and with this term came a complete revolution in the teachings regarding the minute anatomy of the nervous system. The neurons are the essential elements, and consist of the cell, the axon and the dendron. It is to bring our knowledge of these up to date that Dr. Barker has written his work.

A feature that at once attracts attention, and gives confidence in the book, is the evident thorough acquaintanceship the author has with the literature upon the subject. To say this is to say a great deal, for the literature upon the nervous system is now a most extensive one. It is apparent, however, that none

are overlooked. The names of such investigators as Apathy, Bechterew, Beavor, Berkeley, Bolk, Dieters, Dejerine, Dogiel, Edinger, Ferrier, Flechsig, Forel, Gehuchten, Golgi, Gowers, Gudden, Held, Heule, Hewetson, His, Horsley, Kolliker, Lenhossék, Lugaro, Marchi, Monakow, Ramon y Cajal, Retzins, Nisse, Waldeyer, Weigert, and such like noted investigators, receive a large share of the author's attention and study. It may be said of the work, what can be said of very few works, that the best has been garnered from all fields.

That the neuron theory has not yet been accepted by all is true, but that it must be accepted by all is equally true. The present work of Dr. Barker's will do much to place this difficult subject in its true light, and establish the correct views and remove the incorrect conceptions that have grown up around this recent view of the construction of the nervous system. The author has a brief in his hand, and he holds it throughout with great vigor.

The nervous system consists of an enormous number of neurons. These are the essential elements. The lymphatics, blood vessels and neuroglia all play an important but an entirely secondary part. It is the neurons alone that conduct nervous energy. This view has done away with the older one of a diffuse nervous network.

The evidence in favor of the neuron theory, derived from the study of degenerations and by differential staining, is well stated, and affords unanswerable proof of its soundness. From these researches we come to regard each unit, or neuron, as being an independent part of the nervous system; and that disease or injury of one portion of the neuron causes disease and degeneration in its other portions. Throughout the work the idea is steadily and clearly held up before the reader of the cerebro-spinal and spino-neural sets of neurons. The upper motor neuron has its origin in the brain cortex, and thence by means of its axons passes down to the anterior coruna of the cord, where it ends without actual junction with the cells of the coruna. The lower motor neurons are the cells of these coruna, and their axons continuing to their ending in a muscle fibre, or gland, or vessel. On the other hand, the sensory neurons come from the periphery as general or special sensation, and pass centrally to the ganglia in connection with the cord, medulla, or brain; and from these a new set of neurons proceed to the ultimate centre. The nerve currents, sensory or motor, pass from one neuron to another as a chain, and not laterally. Then come the neurons that in the centres associate the lower neurons into a composite system, and establish end-less associations and reflexes.

An unusually able section of the work deals with the neuron

as a unit in physiology and pathology. A good statement of the case is made, that when the peripheral motor axons are destroyed, degeneration sets in upwards towards the cells in the cord, and that this degeneration may become complete, though not so rapid as that which takes a downward course. The remarkable influence of poisons, and consequently the toxins of diseases, are discussed. There is here a large field for future study; but enough has been done to show that certain neurons are injured by some agents which do not affect other neurons; as, for instance, the selective action of atropia, curare, strychnia and drugs; and syphilis and poliomyelitis among diseases.

The entire work is profoundly interesting reading. It is written in a clear and liquid style; and, while thoroughly scientific, is not dull nor heavy.

The paper, binding and type are excellent; and the many illustrations, plain and colored, are of the highest order of merit.

We congratulate Dr. Barker on the completion of this work; and would express the hope that it may find many readers, as we feel none will be disappointed. To read the work is a great pleasure.

J. F.

Extra-Uterine Pregnancy. A clinical and operative study.

By JOHN W. TAYLOR, F.R.C.S. (Eng.), Senior In-patient Surgeon to the Birmingham and Midland Hospital for Women, etc. London: H. K. Lewis. 1899.

A monograph from Mr. Taylor's pen on a subject so interesting and yet so imperfectly understood as extra-uterine pregnancy naturally excites much interest. In treating of the causation and pathological anatomy of the trouble, the author differs from the hitherto accepted theories, and, we think, gives good reasons for so doing. Desquamative salpingitis, which Lawson Tait considered the chief etiological factor, was not present in any of his series of forty-three cases. He considers mechanical difficulties in the passage of the oöspem down the tube to be of chief importance, and of these mentions specially an atrophic condition of the tube, due to hyper-involution or congenital want of development, as bearing on the phenomenon of early rupture.

All cases are regarded as primarily tubal, and the classification adopted is: (1) Tubo-abdominal—abdomen secondarily invaded; (2) tubo-ligamentary—broad ligament secondarily invaded; (3) tubo uterine (interstitial)—uterus secondarily invaded. Mr. Lawson Tait and Mr. Bland Sutton have maintained that "in all tubal pregnancies which survive primary rupture and continue their development, the gestation sack is formed in part by

the expanded tube, but mainly by the layers of mesometrium." Mr. Taylor, on the other hand, states that the pregnancy often becomes directly "abdominal," and that the requisites for the survival are an unruptured amnion, which forms the sack, and a placental attachment to tube.

Chapter VIII., on tubo-ligamentary or broad ligament pregnancy, is a most interesting exposition of the subject. "Hematoma of the broad ligament is in only a minority of cases, due to extra-uterine pregnancy," is a statement that is not universally accepted. There is a little confusion in the author's use of the term "intra-peritoneal," *e.g.*, "It must be remarked that every normal intra-uterine pregnancy is, from an anatomical standpoint, entirely sub-peritoneal throughout, and yet the distended uterus forms an intra-peritoneal tumor." It is not clear what standpoint the author takes.

Chapter X., devoted to review and classification, is excellent.

Chapters XI. and XII. deal with the diagnosis. In the section on diagnosis proper, fourteen signs and symptoms are enumerated, and the difficulties attending their proper recognition are well dealt with. In cases of early rupture the author says of the evidence to be obtained from the breasts and areolæ: "These are always feeble and more often wanting in the early stages of extra-uterine pregnancy, and any search for them with reliance on their importance will probably increase doubt at a time when certainty and action are of the utmost value."

The section on differential diagnosis makes evident the necessity of the "tactus eruditus." In diagnosing from a retroflexion of the gravid uterus at a comparatively late period, "In one way or another the position of the fundus must be ascertained; its presence or its absence in front of the tumor must be satisfactorily determined." Again, in diagnosing from blood tumors of the tube or ovary with twisted pedicle, "The tumor itself, however, is not so intimately connected with the uterus as a tubal pregnancy would be." The latter part of the section on diagnosis deals with cases of growing, full-term, and dead pregnancies, and of interstitial pregnancy.

In Chapters XIII. and XIV., treatment is taken up. This is almost entirely operative. The author recognizes that where there is cessation of growth, cessation of hemorrhage, and cessation of pain, a certain percentage of cases may recover, and absorption take place; but he finds that this process of cure is rarely satisfactory, and contrasts unfavorably with operative interference. In cases which have advanced nearly to term he prefers to operate at the most convenient date in the ninth month, but not to wait for the occurrence of spurious labor. The vaginal and abdominal operations, and the after treatment are all carefully described.

Chapter XV. deals with the questions of retained fetus and secondary infection of the pregnancy. The author finds that tubal pregnancy recurs in about 4 per cent. of cases, but does not think this justifies the removal of both appendages at the original operation, unless there are found special indications for it.

There are sixty-five illustrations, principally simple diagrams, which aid very materially in elucidating the text. We cannot approve the fashion of giving important information in the form of lengthy foot-notes, but apart from this the writing is clear and forcible. The book is of convenient size and well produced, as all of Lewis' publications are.

A Text-Book of Diseases of the Nose and Throat. By D. BRADEN KYLE, M.D., Clinical Professor of Laryngology and Rhinology, Jefferson Medical College; Consulting Laryngologist, Rhinologist and Otologist St. Agnes' Hospital; Bacteriologist to Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases; Fellow of the American Laryngological Association, etc. Philadelphia: W. B. Saunders.

This admirable work has just been issued from the press. In concise and comprehensive style the author throws open a new field of thought to the student of laryngology and rhinology. As a pathologist he has endeavored to classify diseases, not according to location of the organ affected, but according to existing pathological conditions. This plan has necessitated much thoughtful study, as well as greatly increased labor; but the reward has been the clearness and conciseness with which he has placed the subject in the new light.

In his treatment of the various subjects, he has kept in line with the advanced thinkers of the day, and he can scarcely fail to impress his readers with the vital importance of his theme.

The divisions covered by his chapters are, in some instances, very wide. For instance, his chapter on "Neoplasms of the Respiratory Tract" extends over more than fifty pages, and includes all neoplasms benign and malignant, from simple papilloma of the naris to carcinoma of the larynx; while the chapter on "Diseases of the Larynx" covers ninety pages, and includes within its limits methods of examination, malformations and deformities, as well as all acute and chronic diseases. The plan is a new one, but whether a wise one or not remains to be seen. Still, the amount of material that he has crowded into the given space, and the lucidity with which he has entered into the details of his subject, cannot but impress the reader with the beauty as well as thoroughness of his style.

There are some subjects that are dealt with much more fully

The Canadian Practitioner and Review.

VOL. XXIV. TORONTO, DECEMBER, 1899.

NO. 12.

Original Communications.

HEART DISEASE FROM AN OBSTETRICAL POINT OF VIEW.

BY ADAM H. WRIGHT, B.A., M.D.,

Professor of Obstetrics, University of Toronto.

The subject of heart disease is very interesting to the obstetrician from many points of view, particularly in connection with marriage, pregnancy, and labor. I desire to consider some of these points in their practical or clinical aspects.

Should a Woman with Valvular Cardiac Disease be Allowed to Marry?—I think the answer to this question should be yes, with certain exceptions. Of course, in a large proportion of cases, probably the majority, the physician is not consulted in the matter. Frequently the refusal to sanction a marriage makes no difference in the course of events. I know one case where a young woman was married contrary to the advice of her physician; but, when pregnancy promptly followed, the young bride and her mother fully realized the serious aspects of her condition, and asked a physician to induce an abortion. When called in consultation I refused to consent to any such procedure on account of the absence of serious symptoms. This young woman is now the mother of two healthy children, aged 3 and 1 respectively, and is herself enjoying fairly good health.

In naming the exceptional symptoms which should change the answer from yes to no, I cannot do better than quote from Hanfield Jones': "If there are any serious symptoms of cardiac disturbance present, or attacks of dyspnea, breathlessness, palpitation on exertion, or hemoptysis, marriage should not be sanctioned." I have for some years entertained the opinion

* Published in the *American Medical Quarterly*, September, 1899.

that a young woman having valvular lesions of the heart, who can carry out her social and domestic duties without any serious symptoms of ill health, should not be prevented from marrying; although I freely admit that child-bearing is likely to aggravate the dangers connected with heart disease. I may say at the same time that I fear the dangers of pregnancy and labor in such patients less than I did some years ago.

Which of the Heart Lesions is the Most Serious?—It is generally acknowledged that mitral stenosis is the most dangerous condition. This was pointed out very clearly many years ago by Angus Macdonald²; and writers since the publication of his work, such as Berry Hart³, Galabin⁴, Fothergill⁵, and others fully endorse Macdonald's views. The rarer conditions of aortic stenosis and aortic regurgitation are dangerous, but not so much so as mitral stenosis. Mitral regurgitation alone is not as a rule a matter of serious import.

How does Pregnancy Affect the System in Cases of Heart Disease?—It is apt to disturb compensation, and the backward pressure may primarily overload the pulmonary circulation, causing serious thoracic complications, and secondarily may interfere with the functional activity of other organs, especially the kidneys and liver. Sometimes the general disturbance in the working of the various organs causes abortion, although, I think, not so often as has generally been supposed. In one patient with marked mitral insufficiency whom I attended about ten years ago, the labor was normal, but the child was still-born. She had one child living, aged 9. After the birth of this child she became pregnant four times with the following results: one miscarriage at three months, and three still-births at term, including the labor in which I attended her. I don't know whether the heart disease was responsible for these results. I have attended in labor several other patients with mitral insufficiency without having any serious trouble. About twenty years ago I was called to attend a woman in confinement. I had not seen her before, and when I arrived the labor was well advanced. The second and third stages were completed in a few minutes. I then found a loud regurgitant murmur. I had before that time supposed that this was a serious condition in relation to labor, and I was much alarmed. Since then I have learned by experience that mitral insufficiency is not a very serious condition in pregnancy and labor.

I formerly thought that the loss of balance throughout the system from heart disease was apt to cause that form of general toxemia which produced eclampsia; but, although albuminuria and dropsy are common complications, I am now doubtful about the frequency of convulsions in such cases. In some cases pregnancy appears to produce no ill effects whatever. Dakin⁶ says

that sometimes the patients appear to improve during pregnancy, owing to the hypertrophy of the heart natural to this period. This is quite in accord with what I have observed. Some of my patients, especially those having mitral insufficiency, have seemed better during pregnancy than they were before. I may say, however, that sometimes they have lost ground after labor, especially during lactation.

Treatment During Pregnancy.—Notwithstanding the favorable issue in a large proportion of cases, every patient should be carefully watched during pregnancy, and should be properly treated when serious symptoms appear. Vinay⁷ says he agrees with Jaccoud, Huchard and others that matrimony is not to be forbidden when a lesion in the heart is compensated and no complication has arisen, but he recommends watchful care during pregnancy. He insists on repose, milk diet, aperients, and free and frequent dry cupping to the thorax. Berry Hart, in the article before referred to, recommends rest and the administration of tincture of strophanthus when circulatory disturbance begins. He prefers strophanthus to digitalis, because it is a heart stimulant without increasing its work by contracting the arterioles, while digitalis, on the other hand, does contract the small arteries, and thus tends to throw more blood into the venous system.

Without any further reference to the views of others at the present time I will give briefly the rules which should in my opinion be observed in such cases:

1. Keep the patient at rest without going to extremes. A certain amount of exercise and recreation is frequently, if not generally, beneficial. Enjoin absolute rest, however, if serious symptoms appear.

2. If the equilibrium of the circulation is disturbed as shown by the ordinary pulmonary symptoms of dyspnea, etc., administer cathartics, especially calomel followed by Epsom salts.

The latter is a good, old-fashioned medicine whose virtues are not as highly appreciated in many quarters as they deserve.

One of the best lessons in therapeutics that I ever received came from Dr. E. A. Moore, of Rochester, who visited the Ontario Medical Association about fifteen years ago. He talked to us about Colles' fracture, and other surgical subjects, in a delightful way; but his short lecture of about fifteen minutes on the administration of Epsom salts for the relief of dropsy caused by heart, kidney and liver disease, as well as for other disorders, was to me the most interesting of his utterances. Although I had been accustomed to use salts more or less since early boyhood, I then discovered that I had never learned how to properly administer the medicine. And yet how simple is the secret! It should be given thoroughly, systematically and continuously

until it relieves symptoms, and after that it should be administered for weeks or months, if need be, to prevent the recurrence of the symptoms. I carried out Dr. Moore's instructions for some time, observed the good results and was abundantly satisfied.

For the last ten years or more I have preached and practised Epsom salts (if I may be allowed to use such an expression) whenever and wherever I had an opportunity. I believe that in cardiac disease of pregnancy with serious symptoms, especially if there be systemic toxemia, the proper administration of Epsom salts will accomplish more good than all other remedies (including rigid dieting) put together. Next to saline cathartics I would place strychnine and digitalis (or strophanthus). For marked dyspnea use nitrite of amyl, which affords more prompt relief for this distressing symptom than any other medicine, so far as my experience goes. Frequent dry cupping of the thorax in the region of the heart is at times beneficial, and is always safe.

3. Regulate the diet. A great many still believe with Charpentier, Vinay, and others, that a milk diet in these cases is the best. I have not prescribed a purely milk diet for any condition or disease for fifteen years. I allow, and generally encourage, my patients to drink as much milk as they like, but no more. I will not discuss in detail the important subject of diet, but will briefly indicate what I prescribe and proscribe in the way of food.

Let the patient select from the following: milk, buttermilk, kumyss, tea, water, lemonade, table mineral waters, fish, oysters, most of acid fruits (strawberries doubtful, frequently injurious), green vegetables, including spinach, lettuce, cabbage, cauliflowers, celery, radishes, rhubarb, green peas and beans, green corn on the cob, carrots, onions, pickles, table bread, breakfast rolls, toast, potatoes, a limited amount of pepper, salt and vinegar for flavoring, oatmeal, cornmeal, rice, tapioca and the like. Chicken every other day. Any kind of meat once a week.

Avoid meats excepting as recommended, meat broths, eggs, cheese, asparagus, sweet potatoes, turnips, beets, syrups, candies, sweet fruits, such as grapes, bananas, raisins, pears and preserved fruits.

These rules as to dietary are practically those adopted by Dr. Charles W. Purdy, of Chicago, for patients suffering from interstitial nephritis, and are more especially important where albuminuria is associated with heart disease. If there be no albuminuria meat and eggs may be added to the prescribed list.

4. Give no diuretic remedies excepting water.

5. Recommend the ordinary daily warm bath to keep the skin acting properly, and nothing else. The wet pack, so dear to some physicians, is, I think, useless, and frequently an abomination.

6. It is sometimes advisable to induce abortion. I am very glad to be able to express a positive opinion that this radical method of treatment is seldom required. If marked failure of compensation occurs early in pregnancy, as shown by serious pulmonary congestion, urgent dyspnea and the like, the patient should, in the first place, receive appropriate treatment. If the symptoms become worse instead of better, operative interference may be deemed advisable. Many women, especially Roman Catholics, will not consent to any such procedure. Of course in such instances the patient's decision should be final. It is extremely difficult to lay down definite rules. I may say, without any hesitation, that I am less inclined to interfere in such cases than I was years ago.

The following case, hereafter described as Case III., while it caused me much perplexity, was very instructive:

Patient three months advanced in pregnancy. Had mitral stenosis. Had severe dyspnea on exertion, palpitation, rapid pulse. Similar symptoms had appeared before pregnancy on various occasions. At one time the pulmonary congestion was marked and caused hemoptysis. After careful deliberation, and with considerable hesitation, we decided to wait for one month, and watch the effect of treatment. The patient went on to full term.

7. It is sometimes well to consider the history of the patient in reference to previous pregnancies. If she has been in great peril during a former pregnancy and labor, one might think it unlikely that she could pass through such an ordeal again. I will refer in detail further on to a case where the patient was in grave danger during and after confinement. I fear that another labor would cause her death. What should I do if she came to me to-morrow two months advanced in pregnancy? I don't know, but I would not advise the induction of abortion unless grave symptoms were present. It has been pointed out by Hanfield Jones and others, that many women go through early pregnancies with comparatively little danger, but each pregnancy causes a certain deterioration of the heart muscle, which is more or less permanent; therefore, the danger of cardiac insufficiency becomes greater with each successive pregnancy. I am not certain, however, that this statement is correct in all cases, as I think I have seen more than one patient in whom pregnancy did not cause any deterioration of the heart muscle.

8. We have sometimes to consider the advisability of inducing premature labor. I can speak a little more definitely respecting this procedure. Angus Macdonald was decidedly opposed to it, because it was "likely to do greater harm than good by disturbing the action of the heart and the condition of the lungs." I think there is a pretty general consensus of

opinion among obstetricians who have devoted much attention to this subject, that the views thus expressed are correct. My own experience leads me to believe that the patient has the best chance when this operation, which is always more or less an act of violence, is not performed. I will simply give the rule that we should not induce premature labor in such cases: but I don't think it should be considered absolute. It might happen that some symptoms would arise so urgent in nature that interference should be considered necessary.

Labor.—How does valvular disease of the heart affect labor? I am not sure that it produces any visible effect in the majority of cases. I have sometimes looked forward to certain labors with fear and trembling; and, much to my surprise, have frequently found them apparently normal in all respects. Reynolds^s says that "labor in the presence of cardiac diseases is apt to be rapid, because the soft parts are usually resilient and lax." In my experience I have found nothing to justify this statement.

Symptoms.—The symptoms during labor are not generally different from those which are found during the last few days or even weeks of pregnancy. The most serious are dyspnea, hemoptysis, precordial distress and palpitation. (Respiration and pulse are generally much quickened.) The dyspnea and other symptoms are aggravated when patient is in the recumbent posture. On this account the patient is in many cases compelled to sit up wholly or partially even while sleeping.

Prognosis.—I have not space to quote authorities to any extent; but I may say in a general way that many careful observers give mortality rates ranging from 10 to 60 per cent. Many writers, who treat the subject carefully in other respects, fail to give statistics. I think it unfortunate that such is the case, because I believe more complete details as to results would show mortality rates much less alarming than those which I have quoted. I believe that the publication of such reports has caused many practitioners to induce abortion when there was no necessity for such procedure.

No statement has surprised me more than that made in three modern American text-books on midwifery, viz., "Jewett's Practice of Obstetrics," by American Authors; "The American Text-Book of Obstetrics," and "Davis' Treatise on Obstetrics," that in cases of mitral insufficiency the proportion of deaths is 13 per cent. In the three books there is little or no evidence as to the origin of the unlucky thirteen. In connection with the statistics referred to I cannot help thinking that various authors have been misunderstood, because they have referred to those cases only where compensation has been seriously interfered with. In addition it is well to remember that some of these

statistics are founded on results obtained during the pre-Listerian era. Judging from what I have observed I am fully convinced that the mortality rates which I have quoted, *i. e.*, 10 to 60 per cent., are altogether wrong, or at least misleading.*

Treatment During Labor.—I have already indicated the medicines which are generally recognized as most suitable during pregnancy. The same line of treatment should be carried out during labor. Give strychnine and digitalis (or strophanthus) to help the heart's action: nitrite of amyl or nitroglycerin (glonoin) for dyspnea and precordial distress. The amyl acts more promptly, while the glonoin acts well when given in small doses for days at a time during the latter part of pregnancy. The application of a cupping glass over the heart helps both dyspnea and irregularity of pulse. Administer chloroform, especially during the latter part of the first and the whole of the second stage of labor.

I find that many obstetricians in Canada think, and I believe the opinion prevails in other parts of the world, that chloroform is dangerous in labor complicated with heart disease. One time I held a similar opinion, but increased experience leads me to believe that chloroform is not dangerous; on the other hand, I think it materially aids in mitigating some of the serious symptoms. Dr. Fothergill, who represents the Edinburgh School, says in his text-book before referred to, that "heart disease in labor is no contraindication for chloroform." He further adds that "those with heart disease need it more than others." It tends to relieve to some extent the dyspnea and the irregularity of the pulse, perhaps largely by preventing straining on the part of the patient. It may be administered even when the patient is sitting up during labor. I think, however, it should be used with caution, and by an assistant who devotes his whole attention to the administration of the anesthetic. Ether, as a rule, however, is positively contraindicated, particularly on account of the pulmonary complications.

The patient should be prevented from straining or "bearing down." At the completion of the first stage it is better, as a rule, to deliver with the forceps. Sometimes it is necessary to let the patient sit up with her head and shoulders held up, or propped up with pillows. In such cases it is sometimes necessary to have the patient in such a position that her buttocks are projecting over the edge of the bed, while an assistant stands on either side, grasping a leg or a thigh and foot so as to prevent her from slipping to the floor. I think it is well to apply an abdominal binder before delivery, which should be tightened

* Some of our physicians appear to take a less gloomy view than the obstetricians. Osler,⁹ in speaking of valvular lesions of the heart, says: "Pregnancy and parturition are disturbing factors, but are, I think, less serious than some writers would have us believe."

during the delivery of the child. At the same time remember that a free hemorrhage is beneficial, and should be encouraged. The object of the binder is to compensate for the sudden diminution of the intra-abdominal pressure. It should, therefore, be applied above the level of the uterus in such a way that it will not prevent slight uterine relaxations, or, in other words, in such a way as not to prevent free hemorrhage. With the same object in view avoid the use of ergot. Fothergill and others advise free venesection from the arm if symptoms of embarrassed circulation persist.

Hart says that the most dangerous time for the patient in such cases is the third stage. This is probably correct, but it is well to remember that grave danger exists for several days after delivery, and, in fact, very watchful care is required for weeks.

I will now give reports of cases of mitral and aortic stenosis, without any further reference to many cases of mitral insufficiency which I have observed, and all of which ended in recovery.

CASE I.—Mrs. A., aged 26; primipara.—Dr. W. P. Caven's patient; long standing heart disease with aortic direct murmur. Present in consultation; labor tedious; forceps delivery, under chloroform; no special symptoms during first and second stages; placenta retained; hand introduced for removal; considerable hemorrhage; aortic regurgitant developed with slight endocarditis lasting about two weeks; recovered.

CASE II.—Mrs. H., aged 23; primipara.—Had heart disease for several years. Dr. Caven saw her with me when four months pregnant; had both aortic and mitral stenosis; considered the advisability of inducing abortion, but decided against because there were no serious symptoms; went on to full term without much inconvenience; labor somewhat tedious, but uneventful; delivered with forceps after dilatation; good recovery.

CASE III.—Mrs. K., aged 32; 3-para.—Dr. Caven's patient. Saw her in consultation when three months advanced in pregnancy. For two or three years previous she suffered more or less from symptoms due to heart disease. Dyspnea on exertion very serious at times; a few attacks of hemoptysis; mitral stenosis; loud presystolic murmur. Dr. Caven feared results if pregnancy were allowed to continue. I advised waiting at least a month. We decided on so doing with the understanding that I was to take charge of the patient. No serious symptoms afterwards. In fact, she seemed better during the latter half of pregnancy than during the first half. Labor—at full term—uneventful up to end of the first stage; no chloroform administered; delivered with forceps; healthy child; good recovery.

CASE IV.—Mrs. G., aged 26.—Had one child sixteen months old when I saw her about the beginning of third month of

second pregnancy; had a double aortic murmur, also presystolic; no serious symptoms. I did not see her after fourth month. Delivered by Dr. Caven at full term; healthy child; no difficulty.

CASE V.—Mrs. S., aged 32; 2-para.—Dr. Graef's patient. Saw her in consultation early in labor. She had suffered much during pregnancy from dyspnea and marked precordial distress. When I arrived, labor was slightly advanced; os partially dilated. She was suffering much from dyspnea and distress in the region of the heart; was unable to lie down; had a well-marked presystolic murmur; also aortic murmur. Inhalation of nitrite of amyl afforded marked relief. We also administered strychnia and digitalis and a little chloroform. I was unable to remain long; Dr. Graef delivered her with forceps about four hours after I left; child dead; patient appeared to be doing fairly well for some days, but died somewhat suddenly the sixth day after delivery. Patient was a poor woman living in a small house without any conveniences: no proper nursing. She refused to go to a hospital.

CASE VI.—Mrs. X., aged 35; primipara—Had suffered for years from mitral stenosis, and had been under the care of Dr. Caven, who consulted me about the case and requested me to help him in her expected confinement. When labor commenced Dr. Caven was out of town and I took charge. Labor fairly easy for a rather old primipara; no serious symptoms, but patient had two large pillows under head and shoulders; waited about half an hour after full dilation, because symptoms were not urgent, and I was afraid of the perineum: administered a little chloroform; finally delivered easily with forceps. I had a competent and experienced nurse to assist me, and did not call any one in to administer the anesthetic. I would not, however, advise others to follow my example in this respect. At the time of writing, the baby is a week old, and the patient has not had an unfavorable symptom.

CASE VII.—Mrs. C., aged 30; 3-para.—I attended this patient in January, 1898, but I describe her case last because I wish to go somewhat fully into details as to treatment. She had been under the care of Dr. Jas. F. W. Ross, in the pavilion of the Toronto General Hospital. He sent her into the Burnside Lying-in Hospital to be placed under my care during her confinement. She had been suffering for some years from mitral stenosis. I first saw her in the Burnside three days before the onset of labor. She had severe bronchial catarrh with slight hemoptysis at times, urgent dyspnea, and marked precordial distress. Was unable to lie down even for a few minutes, but lay propped up in bed almost in a sitting posture. Her sufferings were great, and her general condition most alarming. After a consultation with Dr. Ross, we decided not

to interfere, but to watch and treat symptoms. Dr. Ross had prescribed strychnine, digitalis and stimulants. I continued on the same line, also prescribed amyl nitrite, to be administered occasionally. Her respirations were rapid, between 40 and 50 at times. Pulse from 120 to 170, sometimes could not be counted. Patient was very carefully watched by the resident assistants, and the head nurse, Miss McKellar. I feared she would not live until labor commenced, but did not feel that I dared interfere. Labor commenced on the morning of January 27th, and continued during the day. The os was fully dilated at 5 p.m. Dr. McEachern administered chloroform, the patient being held in the sitting posture on the edge of the bed by two members of the resident staff, while I delivered with forceps. A binder was put around abdomen, and tightened during and after delivery. Fairly free hemorrhage followed and was encouraged. The dyspnea and distress continued for hours. At times we thought she was dying. We gave strychnine and digitalis and small doses of whiskey, but she was still unable to lie down for some days after delivery. About the fourth day the symptoms became less severe. After that, recovery was somewhat rapid, and in one month she went out of the Burnside fairly well. The baby was healthy, though not large, and became a great pet among the nurses. He left the hospital with his mother, under the properly legalized name of Adam Ross Cooper. The onlookers, and others who heard of the case, were surprised at the administration of chloroform under such circumstances, but as I have already discussed this procedure I will only add now that I believe the chloroform was a decided source of benefit to this patient. I have before referred to the prospect if this woman should again become pregnant. Would it be possible for her again to go through pregnancy and labor, and live? I don't know, but I hope she will never try.

Without any reference to mitral insufficiency, I have recorded these seven cases of serious heart lesions with one death. It is quite possible, if not probable, that this patient might have been saved if she had been properly nursed in a comfortable home or hospital. With the worst possible sort of surroundings and the poorest kind of nursing she lived six days after delivery.

I will briefly summarize my views as follows:

1. A woman having a heart lesion which is compensated should not be prevented from marrying.
2. Abortion should not be induced on a woman with heart disease, unless very serious symptoms are present.
3. Premature labor should seldom or never be induced on account of heart disease.
4. Mitral stenosis is the most serious heart lesion during

pregnancy and labor—aortic stenosis comes next—then probably aortic incompetency. Mitral insufficiency is the least serious lesion.

5. Treatment during pregnancy. Administer the following according to indications: Strychnine, digitalis (or strophanthus), cathartics, nitrite of amyl, nitroglycerin, and regulate the diet.

6. Treatment during labor. Keep up the action of digitalis (or strophanthus), especially during first stage. Give strychnine and stimulants if required, and chloroform. As soon as the first stage is completed deliver with the forceps.

7. Watch the patient carefully during the third stage (the most dangerous time) and for some days after.

30 GERRARD STREET EAST.

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SPINA BIFIDA.*

BY GEORGE A. BINGHAM, M.B.

Fellows of the Clinical Society:

I have first to thank you for what I consider the exceedingly great honor you have done me in electing me your President. As a charter member of this Society I have from the first done what little I could for the furtherance of its interests, and during the present session I shall esteem it a privilege to do my best in the same direction. Though naturally it is with some timidity that I assume the responsibilities of this position, more especially in view of the uninterrupted line of distinguished gentlemen who have preceded me in office, yet feeling assured of the loyal support of the Fellows, and conscious of the fact that I have an enthusiastic committee to assist me, I am surely justified in the hope that the Society will in nowise retrograde during my incumbency of office. From its inception our Society has prospered, and in reviewing the causes that have contributed most largely to that success, I am reminded of the intensely practical nature of the reports presented, and of the discussions arising therefrom. Brevity and conciseness have also been marked features of our clinical reports. May I urge a continued fostering of these virtues? Indeed, they are necessities if we desire to profit from the great mass of clinical material now placed at our disposal through the medium of our Society.

Before discussing the subject proper of this brief paper, it is fitting that I should refer to the loss we have sustained in the death of the late James E. Graham. The profession at large throughout the Dominion have already testified to their appreciation of his worth, and we, as members of this Society, who have been brought more or less constantly into relationship with him must feel his loss even more keenly. A charter member of our Society, he was always ready to place his services at our disposal, and I happen to know from a personal statement how thoroughly he appreciated the helpfulness of the benefits to be derived from our clinical reports and discussions. In his decease we have lost from our roster an unostentatious but enthusiastic worker and a kindly gentleman. We shall miss his presence at our meetings, but the influence of such a life must be as enduring as the eternal hills.

With your permission, I shall deviate somewhat from the precedent established by my predecessors, and instead of a formal address shall present to you a summary of clinical reports from my case book in connection with the treatment of

* President's Address—Toronto Clinical Society.

spina bifida. The last word has by no means been said in connection with this subject, and it would seem to be desirable to obtain as many reports as possible in regard to the treatment of this condition. Rose and Carless in their excellent manual say: "The majority of these cases are best left alone," etc. Should operative treatment be deemed advisable, they claim, from statistics, the best results from Morton's method. This is in line with the well-known report of the London Clinical Society, and also with the statistics given in Morton's own work, published twelve years ago. Thanks to Mayo Robson, Nicoll of Glasgow, and others, the open method of treatment by excision can now furnish statistics even superior to those claimed by the advocates of Morton's method.

The London Clinical Society which investigated the subject carefully, found a mortality of 38 per cent. after treatment by Morton's method, and yet were constrained to recommend this as the best, in fact, the only justifiable, method of treatment.

Nicoll, who has reported upwards of thirty cases operated upon by the open method, says: "My experience has been such as to convince me that, in the matter of mortality, it would probably not be difficult to produce a series of cases operated on for spina bifida, in which the mortality would compare favorably with that of the operation for the radical cure of hernia. To obtain this result it would be necessary to reject for operation cases in which the sac had burst or was sloughing, and cases with very pronounced hydrocephalus. A moderate degree of hydrocephalus I have found no bar to success."

This great divergence of opinion and practice in regard to the treatment of a grave malformation occurring once in every one thousand births must be my excuse for this brief report.

The cases which I shall summarize are eight in number, and have all, with one exception, been operated on more than a year ago. Seven were meningoceles, one meningo-myelocele; seven were in young children, one in an adult. As to evidence of nerve involvement they may be classified as follows:

One case of paraplegia, with complete loss of control over bladder and rectum (this case, by the way, was fatal, and was a simple meningocele); three cases of club-foot—one single, two double (two of these cases were meningoceles, one meningo-myelocele); two cases of hydrocephalus, both of which terminated fatally (as to previous convulsions, the histories were imperfect and doubtful, and are therefore omitted). Four cases were normal so far as development was concerned, except that in one, the adult, there was marked asymmetry of the head and face.

Of these eight cases there were six cases of *permanent*

recovery and two deaths, a mortality of 25 per cent. These cases were not selected, and in no case did I refuse to operate, simply placing the facts and probabilities before the parents in each case. In one of my fatal cases, the child, a hydrocephalic, was dying when operated upon. Morton's treatment had been used in this case several times; he had just arrived a long journey from the country, and I only consented to operate upon the urgent insistence of the parents. It was a simple meningocele, with the sac ulcerated and leaking in places, and was rapidly closed off with mattress sutures and cut away, the lateral flaps brought over and united. A few minutes completed the operation, and the child lived twenty-four hours. All who saw the case felt sure of a fatal termination within twenty-four hours without an operation. This termination cannot fairly be attributed to the operation.

The other fatal case, a large meningocele, which had previously been tapped, did perfectly for twelve days, then leakage began. This continued for some days and finally ceased. Symptoms of sepsis developed several days after this event, and the child died on the thirtieth day after the operation. This child was hydrocephalic.

As to technique, in my earlier cases the sac was tied off, or, if large, stitched off with mattress sutures; then flaps of skin and subcutaneous tissue were brought over and sutured.

In Case No. 8, where the vertebral deficiency was great, two layers of flaps were made, one consisting of muscular tissue (erector spinæ) and the other of skin and subcutaneous tissue, the former being inverted (as in closing a wound of the intestine) and the latter everted.

Silk was used altogether for the buried sutures or ligatures, except in Case 8, where catgut was used for the muscular flaps.

In every case where the slightest doubt existed as to the contents of the sac, it was deliberately opened before being closed off, no extraordinary effort being made to prevent the escape of cerebro-spinal fluid.

The after treatment is, of course, all-important. The nurse is a potent factor in the success or failure of the operation. During the first week the child should rest on its abdomen in such a way that the wound should be the highest point upon the body, and every precaution taken to prevent infection from excreta, etc.

Those who advocate the open treatment at all, are well agreed as to the methods to be adopted in cases of meningocele. It is in cases of meningo-myelocoele that difficulties and differences arise. The nerve elements of the cord within the sac must not be sacrificed, and, if possible, should be restored to the spinal canal. In order to accomplish this, Mayo Robson

advocated that the nerve filament should *not* be dissected from the sac, but that the portion of the sac wall to which the nerve is adherent, should be cut away from the remainder of the sac, and that the nerve and its adherent ribbon of sac wall should then be replaced within the canal. This is the method to which I resorted in Case 8, and the result was entirely satisfactory. Nicoll, of Glasgow, has recently reported a number of meningo-myeloceles, to which he found the sac "so occupied by expanded nerves, that it was impossible to excise even small portions of the sac without injury to the nerves. With the knife he carefully tore such small areas as seemed free from nerve tissue, and gently but pretty thoroughly roughened the whole interior, including the surface of the nerve cords in many parts, and stitched up." The results, he says, have so far been excellent. The sac is replaced by a hard fibrous nodule and nerve function is carried on normally.

Thus we have three different methods by which we may meet the three conditions already mentioned: (1) The simple meningocele treated in the usual way. (2) The sac, containing a moderate number of nerve filaments, treated by Mayo Robson's method of "ribboning" the sac, removing the redundant portion and replacing the nerve filaments within the canal. (3) The sac, filled with expanded nerves, in which case Nicoll simply scarifies the whole interior without attempting to reduce the mass, and trusting to fibrous inflammation to obliterate the sac. There might be a fourth class of cases mentioned, in which the sac is ruptured during the birth of the child. I am not sure as to our duty in these cases. I know of one case in this city in which there is a very definite history of rupture during birth, and which was treated by pressure alone. This child is now ten years of age, is fairly healthy, but not robust. She has a hard fibrous mass, three inches across, in the mid-lumbar region. Her nerve functions are normally performed. A similar case is reported in the *Brit. Med. Jour.* for October, 1897. This case also recovered fully under pressure treatment. I am inclined to think, however, that spontaneous cure in these cases is very exceptional, and that the child should be given the benefit of an immediate operation.

In looking over my cases I have been struck by three facts:

1. I did not decline to operate in any case. I am as yet entirely at a loss as to where to draw the line beyond which the operation is unjustifiable.

2. The presence of nerves within the sac is not necessarily indicated by deformities or paralysis. Reynolds Wilson, of Philadelphia, says: "Imperfect fusion of the vertebral arches is due to early defect in the blastoderm. This depends on some cause which may interfere with the development of other

tissues, connective, muscular and integumental." May this be the explanation of the numerous cases of talipes occurring with simple meningocele?

3. Leakage may occur several days after operation, but may spontaneously cease; and if great care be exercised no sepsis may result, and the case may go on to complete recovery.

CASE I.—August, 1896. Lumbo-sacral meningocele; aged 10 months; no complication; simple flap operation; recovery.

CASE II.—October, 1896. Third and fourth lumbar meningocele; aged 14 months; no complications; sutured off sac; skin flaps; recovery.

CASE III.—January, 1897. Lower lumbar region meningocele; aged 12 months; paraplegia, hydrocephalus; Morton's method had been used several times; child evidently cannot live; operation demanded by parents; child died after twenty-four hours.

CASE IV.—October, 1897. Fourth and fifth lumbar meningocele; aged 9 months; hydrocephalus; excision six days after aspiration; head reduced one-half inch in circumference two weeks after operation; leakage occurred twelve days after operation; wound again closed under pressure; symptoms of sepsis and death on the thirtieth day after operation.

CASE V.—November, 1897. Man aged 22; cervico-dorsal meningocele, very large; marked asymmetry of head and face; excision; recovery.

CASE VI.—March, 1898. Cervico-dorsal meningocele; boy, aged 11½ years. single club-foot; uninterrupted recovery.

CASE VII.—August, 1898. Lumbo-sacral; aged 5, found a lipoma covering large deficiency in the spinal column, with meningocele protruding. Removed lipoma and brought flaps over; leakage began on fifth day and continued for a week, when complete recovery took place. Had previously in this case successfully removed both astraguli for double club-foot, viz., T. equino-varus and T. calcaneo-valgus.

CASE VIII.—December, 1898. Lower lumbar meningo-myelocele; boy, aged 8 months; double T. equino-varus; tumor, 4½ x 5 inches. Skin transparent and giving way on surface; opened laterally after dissecting flaps and found numerous nerve filaments adherent to surface. Removed adherent ribbons of sac with the nerves attached and returned to canal. Closed wound with double line of sutures. Dressing removed on fifth day and found dry. Three days later some leakage, which ceased after a week; recovery. No paralysis. Talipes easily corrected by plaster-of-Paris; limbs weak; not well developed.

A FEW NOTES ON EAR, NOSE AND THROAT WORK, AS TAUGHT IN BERLIN AND VIENNA.

BY JULIUS E. KLOTZ, M.B., VIENNA.

A year's attendance at the greatest polyclinics of the world in these specialties, besides vastly improving one's knowledge of them directly, and of the relations which these organs bear to each other and to constitutional diseases indirectly, cannot fail to impress the student from Canada with the difference in the methods of teaching as employed in these Meccas of medicine and as used in his *Alma Mater*.

All post-graduate students who seriously devote themselves to the study of diseases of the ear, nose and throat, take the course of operative work on the cadaver, which includes anatomy, physiology and surgery, and pathology to a greater or less extent.

Any number of temporal bones are at one's disposal, and on these the various mastoid and middle ear operations are practised, under the guidance of a "Docent," who also demonstrates the variations in the configurations of the bone, developmental changes and so on. The petrous portion of the temporal bone is sawn into several small cubes and the internal ear chiselled out and examined, and in this careful, painstaking way a most thorough acquaintance with the surgical anatomy of the organ of hearing is acquired.

Pathological specimens of the ear, as well as of the nose, mouth and larynx, are retained for microscopical examination. The gross specimens are also examined with the stereoscope, a very useful instrument to assist us in getting a general impression of the gross pathological changes.

The different polyclinics vary much not only as regards the number of patients and visiting physicians that attend each, but also regarding the therapeutics and modern appliances. A better class of patients visit the Berlin hospitals, there being less poverty there than in Vienna. Here one is struck with the large number of cases of tuberculosis, laryngitis, and syphilis of the mouth and larynx, the constitutional disease taking on its worst form among the poor of this city.

All operations are performed in the Polyclinic or its adjoining operating room. Such students (*i.e.*, post-graduates) who have proved themselves capable of making good diagnoses, are permitted to perform minor operations, including paracentesis of the tympanic membrane, removal of adenoids and tonsils, cauterizing turbinates, snaring polypi, etc., etc.

The more difficult operations which students are sometimes allowed to perform, are those on the mastoid, removal of polypi from the ear, removal of turbinates, opening the antrum of Highmore, curetting the larynx, etc.

A most thorough instruction in the therapeutics of these special organs is given, but not always practically demonstrated in the polyclinics, time and expense being considerations here as well as in America.

Of the more recent drugs at present employed here, meta-cresol-anitol and phenolo-rabium-sulpho-vicinicum may be mentioned in connection with the treatment of ozena. Tri-chlor-acetic acid is very largely used for the reduction of nasal hypertrophies. For removing adenoids Kirstein's ring-messer (knife) is considered the most suitable. Spoon-shaped curettes and forceps are also employed, but are generally thought to be inferior to the ring-knife. In patients who refuse oral instrumentation for this condition, a cold snare introduced through one of the nasal orifices is occasionally used; needless to say the results are not very satisfactory. Iodoglycerine is almost universally employed in the treatment of atrophic rhinitis, laryngitis, and pharyngitis sicca.

The genius of one of the assistants at the Chiari Clinic is responsible for a pair of scissors which are now being much used for the removal of the hypertrophied posterior end of the inferior or middle turbinate in such cases where the wire snare will not grasp the offending member. The cutting surface of this instrument is diamond-shaped, and it may be described as two pairs of scissors placed point to point, the opposing points being united by small screws.

Prof. Lucal has used with considerable success his "Druck-Sonde" for giving vibrations to the ossicles of the middle ear. It is as yet little used and requires great care in manipulation. Operations on the nose require less skill than those on the ear or larynx. Before taking up operative nasal work on the cadaver, considerable time is devoted to passing sounds into the adjoining cavities of the nose, so as to thoroughly familiarize the practitioner with the location of the ostia of these cells.

Although intra-laryngeal operations are not common, it is necessary to become skilful in the instrumentation of the larynx. This requires considerable practice on the cadaver, or better still, on Frau Gele, of Vienna. This well-known personage is to be seen daily in the General Polyclinic. Post-graduate students pay her one florin (40 cents) per hour to practise touching the different parts in the interior of her larynx with a sound. Intubation is practised on her, and also the removal of foreign bodies from the larynx. These foreign bodies, consisting of glass beads attached to silk threads, are introduced by means of laryngeal forceps and then removed with the same. It is excellent practice, and graduates of the Vienna Polyclinic are much indebted to this estimable lady who for over twenty-seven years has thus ably assisted in the scientific progress of laryngeal surgery.

Progress of Medical Science.

MEDICINE.

IN CHARGE OF W. H. B. AIKINS, J. FERGUSON, T. McMAHON, H. J. HAMILTON,
AND INGERSOLL OLMSTED.

A Case of Menstruation from the Ear.

For several years Lermoyez has been watching the case of a young woman, who has her menstrual periods from the right ear. Her first menstruation was from the auditory canal. Every month, after a prodromal period, characterized by pain in the head and general malaise, there has occurred through the auditory canal a flow of clear blood, non-coagulable. There has never been discovered any lesion preceding or following this flow. The tympanum is intact. The cutaneous vessels of the canal are much dilated, and this leads to the supposition that the hemorrhage is produced by the rupture of some of these. After some three years menstruation has been effected through the genital canal. Little by little, this has been replacing the auricular periods, the latter appearing now only every two or three months.

Etiological Diagnosis, by Means of the Skíagraph, of Obstinate Intercosto-Brachial Neuralgias.

Merklen relates two cases of intercosto-brachial neuralgia manifesting themselves for many years by continuous and paroxysmal pains, which resisted all treatment. The skia-graphical examination of the patients has shown that in one patient the pains were due to compression of the nerve-roots by Potts' disease, with abscess at the level of the third dorsal vertebra; and in the other patient, to an aneurismal dilatation of the posterior part of the arch of the aorta.

Relapsing Arthropathies.

Lannois presents a man forty years of age, who was brought into his office in the month of March in a state of profound cachexia. He was pallid and thin, complained of pains everywhere, and was unable to make any movement whatever. Most of his articulations were, and still are, the seat of deforming arthropathies. The cause of these disturbances is gonorrhœa. The patient contracted this disease first at twenty years of age. Up to this time he had always been in good health. Ten years later he had a second attack, followed by arthritis in the right

knee and in the articulations of the feet. At thirty-three years of age, a third attack was accompanied, almost immediately after its appearance, by metatarsal articular disturbances, disturbances in the tibio-tarsal articulations, and in the left knee. In six months a fourth attack of gonorrhea brought on arthropathies in the articulations, which had been first affected. Finally in the month of December, 1898, a fifth gonorrheal attack brought on new arthropathies on the internal surfaces of the two great toes.

Bacteriological examination of the urethral pus and of the urine has never revealed gonococci. In spite of this fact, Lannois declares that there can be no doubt of the importance of gonorrhea in the causation of relapsing arthropathies and trophic disturbances presented by this patient. Moreover, the articular lesions, their symmetrical character in the feet (which cannot be attributed to want of movement through functional weakness), and the trophic changes in the skin are in favor of some influence from the nervous system. It is probable that the toxins produced by the microbial germination in the urethra and the bladder must be taken into consideration, since they might act either on the central nervous system or on the peripheral nervous system.—Translated from *Giornale Internazionale delle Scienze Mediche* by W. HARLEY SMITH.

ORTHOPEDIC SURGERY.

IN CHARGE OF CLARENCE L. STARR, M.D.

Internal Derangements of the Knee-Joint.

W. J. Walsham (*Brit. Med. Jour.*, July 29th, 1899) deals with the subject of internal derangements of the knee-joint, and throws a great deal of light upon a subject which is often the cause of much anxiety to the surgeon. He classes these derangements thus: 1. Loose bodies. 2. Detachment, or displacement of the semilunar cartilages. 3. Enlargement, with nipping of hypertrophied synovial fringes. 4. Elongation of ligamentum patellæ.

These may have certain symptoms common to all, viz., effusion into joint cavity, a feeling of weakness or disability in the joint, some limitation of motion, pain, and, at times, a feeling as of something slipping in the joint. There is also usually a history of some injury, blow, or sprain. That the condition is more than one of simple synovitis, is determined by the fact that after cure of the synovitis by the usual means, a recurrence takes place when patient attempts to go about.

Loose bodies are as a rule easily diagnosed, as they can

be felt, by both surgeon and patient, to slip about in the joint. That the diagnosis is not always easy, is instanced by two cases in which loose bodies were suspected from oft-recurring synovitis, but could not be demonstrated even after careful search. In the first case, the loose body was located by means of the X-rays, but the second was only found after the joint had been explored, by dividing the patella, when the offending body was found deeply lodged in the intercondyloid notch. Both of these cases recovered completely after operation.

The diagnosis between detached semilunar cartilages and hypertrophied synovial fringes is often difficult. The writer finds the so-called characteristic signs, viz., sudden locking of the joint and projection of the cartilage, rather uncommon, and generally had to base diagnosis on limitation of motion, with more or less clicking or snapping on motion of the joint, together with slight swelling and pain on pressure over the location of the cartilage. In several cases after operation the cartilage was found folded on itself, and thus caused the creaking or snapping sounds.

The signs of hypertrophied fringes are much the same as in displaced cartilages; except that there is never locking of the joints. There is usually slight limitation of motion, and often the fringe may be felt as a soft pad. It is necessary also to remember that there may be more than one fringe present.

The elongation of the ligamentum patellæ is less common than any of the other forms of internal derangement. It may cause sudden locking of the joint by allowing the patella to slip over the external condyle of the femur. When there is elongation of the patella ligament, the patella is found on a higher plane than normal, and looks almost directly upward when the knee is flexed, instead of forward and slightly upward.

In treatment of all these cases except the last group, it may be necessary to open the joint, and the writer states that it may be done freely and without danger, under proper precautions. He then compares the synovial cavity with the peritoneal cavity, and shows that they correspond closely in structure and physiological function, and in cases where, for any reason, a splint which limits the movements of flexion and extension, fails, or is not advisable, owing to the occupation of the patient, the joint may be explored with as little hesitation as the peritoneal cavity now is.

Mr. Walsham reports having opened the knee-joint upwards of twenty times in the last six years without any ill results.

In opening the joint, regard should be had to the following precautions:

1. Preparation of patient. It is most essential that the

patient should stay in bed three or four days, during which time the diet and secretions are regulated and knee surface rendered thoroughly aseptic, and posterior splint applied.

2. Arrest hemorrhage before capsule is opened, and flush joint with mild boric acid solution to get rid of all blood clots and debris.

3. Accurately suture synovial membrane and capsule, preferably with kangaroo tendon.

4. Put limb absolutely at rest after operation on a well fitting back splint.

5. Commence passive motion as early as fourteenth day, allowing patient to walk by twenty-first day.

In regard to treatment of elongated patellar ligament, it is advisable to cut off the tubercle of the tibia, transplant it lower down rather than attempt to shorten the ligament, as the ends fray out when attempt is made to suture them.

Operation for Relief of Deformity of Forearm and Hand Following Infantile Hemiplegia.

A. H. Tubby (*Brit. Med. Jour.*, August 19th, 1899) presents a description of an operation for the relief of the flexion and pronation of the forearm and hand, which so often remains after infantile hemiplegia. To overcome the excessive pronation the writer detaches the insertion of the pronator radii teres from the radius, passes the detached tendon through an opening in the interosseous membrane, and reinserts it, after thus winding around the radius, in its old position.

This changes the pronator into a supinator. The flexor carpi radialis, which acts also as a pronator, is divided at the wrist, as are also the other flexors originating from the internal condyle of the humerus. The hand is put up in a semiflexed position, and the forearm supinated for eight days, when the hand is gradually extended daily until straight.

Pronation is not entirely prevented, as the pronator quadratus is left intact. The writer reports satisfactory improvement in two cases.

Congenital Club-Foot.

Dr. Henry Ling Taylor (*Pediatrics*, September 1st, 1899) records very concisely the objects and methods of treatment of congenital club-foot.

The objects are to thoroughly correct or overcorrect the faulty position of the foot, and then maintain the overcorrected position until growth has moulded the parts so as to adapt them to their new position, and all tendency to relapse has disappeared.

The methods employed differ in the hands of different men. Dr. Taylor evidently favors the more conservative plan of continuous leverage by means of braces or plaster dressing, correcting first the varus and afterwards the equinus deformity.

He advocates a brace with a steel sole plate, and inside upright bar with a screw stop at ankle by means of which the foot may be turned out. This flexion deformity is also corrected by the same mechanism, the heel being kept in the splint by means of a heel strap which is fastened to adhesive straps attached to the leg. If no progress is made by mechanical leverage an anesthetic is administered and the foot manipulated. If this is not sufficient, the tendo Achillis and plantar fascia, one or both, are divided, and the foot put up at once in an overcorrected position. These means have been found sufficient in the hands of Dr. Taylor to correct nearly all cases under six years of age.

In older and inveterate cases only is it recommended that any extensive bone operations should be done, and then the operation should be considered only one incident in the treatment which will prove inefficient unless the deformity of the foot is overcorrected and so held for a long time.

THERAPEUTICS.

IN CHARGE OF GRAHAM CHAMBERS AND J. T. FOTHERINGHAM.

Fissure of Anus.

Allingham uses the following ointment :

R	Extract of hemlock.....	5 grs.
	Castor oil.....	15 grs.
	Lanolin.....	30 grs.

M. Sig.: To be applied to parts after each action of the bowels.—*Jour. of Medicine and Science.*

Apomorphine in Acute Alcoholic Delirium.

Tompkins calls attention to a new use to which he has several times successfully put apomorphine hydrochlorate. He says that in cases of acute alcoholism with delirium it "gets in its work in minutes, whereas it takes hours for bromides, chloral, and the like to have effect." He pronounces it far superior to morphine in such cases, as it eliminates the poison, while morphine dries up the secretions. He says, however, that its use is generally contra-indicated in genuine cases of delirium tremens, because there is usually weakness of the heart. He cites one of his cases in which he was called about

midnight to see a man in convulsions. The knowledge of the man's habits and the odor of liquor on his breath made the diagnosis easy, so he at once injected hypodermically $\frac{1}{10}$ gr. of apomorphine hydrochlorate. In four minutes free emesis occurred, rigidity changed to relaxation, and excitement to sleep.—*Merck's Archives*.

Exophthalmic Goitre.

The sulphate of quinine personally administered with remarkable results, arising from its influence in producing vasoconstriction of the vessels of the head and neck. Fifteen grains of it are given at night after supper, and again a quarter of an hour later. This treatment decreases the tachycardia, diminishes the exophthalmos and the size of the goitrous swelling. Paulesco (*Revue de Ther. Méd.-chir.*, February 1st, 1899).

Night-sweats of Phthisis.

Siefert's formula is:

R Agaricin..... gr. viiss.
 Dover's powder..... 3ij.
 Powdered marshmallow,
 Mucilage of acacia, of each. 3j.

Divide into 100 pills. One or two pills in the evening.—*Le Progrès Médical*.

Epistaxis.

In a case of severe epistaxis, Prof. J. Chalmers Da Costa used Carnot's formula of:

R Normal salt solution..... 16 parts.
 Gelatin..... 1 part.

Saturating the cotton with this solution, he plugged the nose in the usual way. The advantage of this solution is that it forms an aseptic coagulum.—*Medical World*.

Impetigo Contagiosa.

In the juvenile type of impetigo contagiosa, plenty of soap and water at frequent intervals, an application twice daily of a five per cent. boric acid ointment, and a thorough soaking of the scalp with crude petroleum for three successive days will, within a week, destroy all active evidences of the disease. One must, however, often wait several days for the brilliant erythema, which underlies the crusts, to disappear. In the adult type, on the other hand, rather stronger drugs must be used, and one must expect a rather longer treatment before the activity of the process is checked. A four per cent. ointment

of sulphur, or the application of black wash for fifteen minutes night and morning, in conjunction with a five per cent. ointment of salicylic acid and carbolized cosmolin, will usually prove sufficient to cope with the bacteriological invasion. Here, again, soap and water and clean towels, razors, combs and brushes are indispensable if one wishes to be free now and all time from impetigo contagiosa. Charles J. White (*Boston Med. and Surg. Jour.*, September 7th, 1899).

Trikresol in Alopecia Areata.

Dr. Granville MacGowan, of Los Angeles, California, thinks he has a more efficient remedy for alopecia areata than any other yet discovered. He has used it in nine cases, with an average cure in two and a half months.

His directions are briefly as follows: Cleanse area thoroughly with benzine. Apply trikresol pure to the scalp. It is well rubbed into the denuded patches and into roots of hairs one-half inch beyond each patch, by the friction of a small swab of cotton tightly wrapped on a wooden toothpick. The burning and pain is borne well, and passes away soon. These applications are made somewhat irregularly, according to the particular local effect produced, but probably on the average every five to seven days till desired result be obtained.—*Pacific Med. Jour.*

PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

Belladonna in the Broncho-Pneumonias of Children

An article on this subject appears in the September number of *Pediatrics*, by D. A. Hodghead, M.D., Professor of Obstetrics and Diseases of Children, in the College of Physicians and Surgeons of San Francisco. After employing belladonna with success in an extremely severe case of broncho-pneumonia, the author decided to undertake a series of experiments to thoroughly establish the use of belladonna in these cases. He was also impressed with the need for effort in this matter since the fatalities in this disease frequently amount to sixty and eighty per cent. Twenty-five of the author's own cases were recorded and five cases in the practice of other physicians. Repeated doses of calomel were used in conjunction with tincture of belladonna. In only two cases was the treatment ineffectual. The following case will illustrate the plan of treatment. The patient was a child of six months. A half-grain dose of calomel was given every hour until the bowels moved freely, and one drop of the tinct. belladonna every hour. One and a half grains of

calomel were given, and the belladonna was continued every hour for twenty-four hours and every second hour for a day and a half longer. In twelve hours there was a decided improvement; in twenty-four hours the child was comfortable, from which time it rapidly recovered. The drug has not been found so serviceable in the early stage of the disease, when the mucous membrane is dry and congested. It becomes especially applicable when the disease is well developed and the bronchial secretions are superabundant.

Aneurism of the Aorta in a Child.

A case of aneurism of the aorta in a child aged ten years is reported in *Pediatrics* for August, 1899, by Dr. Elliott, of Bristol. Patient had been ill for six months before admission, suffering from heart disease, so the parents stated. Before the onset of the present illness had good health. Had not suffered from scarlet fever, rheumatism, or cholera. A loud, rough systolic murmur was heard, sometimes best over aortic area, and sometimes best over pulmonary. Distinct fremitus heard where the murmur was loudest. Apex beat was displaced one inch outward. Aneurism was marked. The temperature was constantly raised. Three months after admission the child died suddenly.

Post-Mortem.—Slight pericarditis; left ventricle much thickened. The aortic valves were glued together with large vegetations. About half an inch above the right side of the anterior semilunar valve was a ragged hole about two-thirds of an inch long, passing upwards in the direction of the artery. This was the opening of a small aneurism which passed forward and appeared between the tip of the right auricle and the pulmonary artery. No disease in any other part of the body.

After pointing out the rarity of aneurism in children, the author refers to a list of fifteen cases prepared by Mr. R. W. Parker. In eight of these cases there was disease of the aortic valves and in only two was the heart reported healthy. Discussion followed as to the manner in which embolism from a detached vegetation caused aneurism. No explanation could be offered, although there seemed to be no doubt that the detached vegetation was the primary cause.

Paralysis in Whooping Cough.

An inquiry into this condition has been carried on by Homind, and published in the *Thèse de Paris*, 1899. Paralysis in whooping cough is not frequent, and appears usually in severe cases occurring in young children. He divides them into three classes: (1) Paralysis of cerebral origin; the most frequent, about 40 per cent. These may assume the form of

coma or of apoplexy, and may be of the hemiplegic type. Epilepsy may follow as a complication, or aphasia. In rare cases the special senses may be affected, giving rise to hemianopsia or blindness. (2) Bulbar paralysis. Sometimes there is a simple paraplegia, and sometimes the picture resembles Friedreich's or disseminated sclerosis. (3) Paralysis of peripheral origin. A few cases of this form are known. These paralyzes may be traced to two causes, infection and vascular strain.

Pericarditis in Children.

A résumé of this subject by A. Baginsky appears in the "Klinisch-therapeutische Wochenschrift," Vol. V., 1898, p. 1620. Pericarditis is a disease of very frequent occurrence in young children. Baginsky had met 64 cases in his hospital work in Berlin. In 24 cases a polyarthrititis was present; 11 were cases of tuberculosis; 11 had pleuro-pneumonia; 7 had suffered from erysipelas and phlegmon; 6 with purulent pleurisy; 5 with a serious form of diarrhea. In six cases measles was the cause. Meningitis, purulent otitis media and diphtheria were also recognized as factors in the causation of the disease.

Baginsky points out that rheumatic affections occur in children much more frequently than is generally supposed. It should be emphasized that grave forms of infectious disease, especially scarlet fever, may also present accumulations of fluid in the pericardium, which should not be classed with pericarditis, however, but which is obviously caused by septic processes. The serous, fibrinous, hemorrhagic and purulent forms of pericarditis also occur in children.

Society Reports.

TORONTO CLINICAL SOCIETY.

The second meeting of the year of the Toronto Clinical Society was held in St. George's Hall, November 1st, 1899, the President, Dr. George A. Bingham occupying the chair. For President's address, see page 682.

Pathological Specimen—Appendix Vermiformis.

Dr. F. LeM. Grasett gave the notes of this case upon which he had operated at the instance of Dr. Fred. Winnett, who was present by invitation at the meeting. The specimen occurred in a lady of middle-life, who gave the history of one or two prior attacks; and on her return home from Toronto she was to have been operated on by her family physician. Dr. Grasett stated that the case had an element of interest from the fact that it was the earliest operation he had ever performed after the initial pain—probably not more than thirty-two hours after. Dr. Winnett's diagnosis had been confirmed by Drs. Grasett and J. L. Davidson in consultation, and an operation advised immediately. There was no difficulty in locating the organ, which was found surrounded by an inflammatory mass, and this mass enclosing the appendix was extracted leaving behind a cavity lined with lymph as large as a man's fist. The patient showed an uninterrupted recovery. Dr. Winnett described the patient's symptoms. There was no pus and no foreign body whatever found in the lumen of the organ.

Muco-Fibrous Polypus.

Dr. D. J. Gibb Wishart and Dr. G. Boyd presented this patient, and Dr. Wishart described the condition and the operation. The patient was a boy about eight years of age, who came to the Victoria Hospital for Sick Children, suffering from nasal polypus. There was a history of successive attempts to remove the polypus from the nose. The boy states he was operated on once a week for a considerable period, and he came to the hospital in an exceedingly nervous condition. On examining his nose a mucous polypus was quite apparent in the left nasal chamber, and Dr. Wishart made one or two attempts to seize the tumor, but found it impossible. He was then placed under chloroform and the naso-pharynx examined. A large tumor was found projecting into the pharynx. It was

snared out through the nares, and turned out to be a muco-fibrous polypus about three and one-half inches in length. There was only one growth. The boy recovered for about ten days, when he was then found to be suffering from a little elevation of temperature and pain in the left ear, that is, on the same side to which the growth was attached. The drum membrane was punctured, and pus exuded. Temperature at one rose to 104 degrees. Later on—about twenty-six hours afterward—she developed marked tenderness and swelling in the glands on that side of the neck along the edge of the sterno mastoid; that was followed by the same condition on the right side. Temperature fell, but again rose to 104 degrees, and there was tenderness in the left lobe of the ear. From that time onward he made an uninterrupted recovery. Dr. Wishart stated these cases are comparatively and especially rare in children under fifteen years of age. The polypus seemed to be attached to the middle turbinated bone about the usual situation. He was at a loss to account for the occurrence of this polypus. There is the possibility of the boy being the subject of hereditary syphilis, though it was not a marked condition. You cannot find much in the literature pointing to such an origin for muco-fibrous polypus. It is stated by Bosworth that the muco-fibrous polypus never causes facial deformity. There is a lack in the ethmoid bone and a distinct sinking in the region of the frontal sinus. He has a highly arched palate and a peculiar formation of the upper jaw. He also presents a double dislocation of the lens.

Hydro-Nephrosis.

This specimen, presented by Dr. Bingham, occurred in a woman of thirty years, and it was peculiar from the fact that the cause of the condition was obscure.

Trephining in Jacksonian Epilepsy.

Dr. D. C. Meyers read the report of this case. The patient himself he presented to the Society last January. The aura was confined to the forearm, and at that meeting the patient gave an exhibition of bringing on an attack and suspending it. He was a young man about twenty-five, who at five years had been struck on the head with a club, falling out of a tree, but sustained no fracture of the skull. Dr. Grasett did the operation, assisted by Dr. Peters. About two and one-half years ago his attacks began to be more severe, he having as many as fifty in a day, when he consulted Dr. Meyers. Ordinary remedies were first tried, and then an operation was advised. The operation was performed on January 20th, 1899. As the seizures were in the forearm, the trephine was placed

over the cerebral centre for that region, as nearly as could be judged externally, and when the button of bone was removed, two veins were seen crossing the field in the dura mater, and the centre was struck just in front of a fissure of Rolando, at a point two inches below the longitudinal fissure. The dura was healthy in appearance, and there was no bulging. Electricity was applied, with very satisfactory results. A probe $\frac{3}{8}$ -inch in diameter was inserted one and one-half inches into the brain substance, and it was interesting to note that there were no ill-effects. As a result of the operation there was paralysis of the muscles of the forearm and hand, which was temporary. Thirteen days after the operation power returned in the long flexors of the forearm. The hand was the last part to regain power, and it had not all returned when last seen. Immediately after the excision of the centre and the completion of the operation, on the same day, he had several attacks, and on the following day. The spasms were entirely confined to the paralyzed muscles, and the attacks varied in number from two to eight. He only remained under Dr. Meyers' care five weeks after the operation, and the attacks were considerably less frequent, and decidedly less severe than before the operation. Dr. Meyers saw the patient last on September 7th, that is, eight months after the operation. He says after his return home the fits were more frequent for six weeks. He never loses consciousness. Six weeks ago the fits entirely ceased, and he now uses the left arm for all purposes. There is still some difficulty in the use of the fingers. He has gained about twenty pounds in weight, can attend to his duties on the farm, and he feels perfectly well in all particulars.

GEORGE ELLIOTT,

Recording Secretary.

Editorials.

THE MEDICAL PROFESSION IN SOUTH AFRICA.

We learn from the *British Medical Journal* that there are about 500 British medical practitioners in South Africa, and a much smaller number of Dutch physicians. The British are distributed as follows: Cape Colony, 268; Natal, 60; Transvaal, 87; Orange Free State, 41; Rhodesia, 24; Zululand, 6; Swaziland, 3. There are 49 in Johannesburg, 38 in Cape Town, 20 in Durban, 13 in Grahamstown, 12 in Pretoria, 12 in Pietermaritzburg, 10 in Port Elizabeth, 9 in Kimberley, and smaller numbers in other towns in South Africa. Among those practising in that country is a Canadian, well known to many of us, Dr. Paul A. Gillespie, of Pretoria, who is President Paul Kruger's private medical adviser. Dr. Gillespie, a son of Dr. Gillespie, of Cannington, received his medical education in the Medical Faculty of the University of Toronto, graduating in 1891. After practising for a short time in Streetsville and Penetanguishene he went to the Transvaal, where he has been highly successful.

There is at present no medical school in South Africa, and the profession as a body has been so much weakened by jealousies and internal dissensions that the prospects for the establishment of an efficient medical college have been rather poor. It is said that there has been a marked improvement during the last ten years, especially in Cape Town, East London, Port Elizabeth, Durban, and Pietermaritzburg, and it is hoped that the presence of Sir Wm. MacCormac in that country may bring about very important results. If Dr. Roddick's proposed bill becomes law we are likely soon to have reciprocity with Great Britain which will practically mean that a Canadian physician may practise his profession in any part of the British Empire. South Africa is likely to become greatly developed after the war, and may furnish a field for a large number of physicians. If so, Canada, which has manufactured more doctors than she knows what to do with, can send a large contingent to that country.

THE WAR IN SOUTH AFRICA.

The Government of Great Britain has pleased the civil profession of that country by appointing three consulting surgeons to assist the military surgeons in South Africa. The Secretary of State for War has made a happy choice, which gives general satisfaction. The men selected are Sir William MacCormac, Mr. Frederick Treves, and Mr. G. Makins. Sir William MacCormac, the President of the Royal College of Surgeons, England, is well known to the many Canadians who have attended St. Thomas' Hospital during the last twenty-three years. Before going to London and St. Thomas', he highly distinguished himself in the Franco-Prussian war. Mr. Makins is also a surgeon to St. Thomas' Hospital, and is recognized as one of the best of the younger English surgeons. Mr. Frederick Treves, the distinguished consulting surgeon to the London Hospital, is probably as well and familiarly known to Canadians as Sir William MacCormac.

We believe that MacCormac and Makins sailed November 4th, intending to go to Natal, while Treves sailed November 11th, intending to go to Cape Town and thence to the front in Cape Colony. We are told by the *British Medical Journal* that Lord Lansdowne considered that in asking for the services of leading civilian surgeons the fee to be offered should be on a liberal scale, and each of these three surgeons will be paid at the rate of twenty-five thousand dollars a year, with allowance for horse, etc. The *Journal* adds: "This is not a moment to make a calculation of pecuniary profit or loss, but we think that the medical profession will be gratified to know that the Secretary of State for War has, entirely on his own initiative, made what must be considered a generous offer."

DOMINION REGISTRATION.

A meeting of the sub-committee appointed to consider the question of Dominion or inter-provincial registration was held in Toronto, November 7th. Our readers will know that the question was discussed in rather a desultory way for many years, especially at meetings of the Canadian Medical Association, without any definite conclusions being reached up to three

years ago. Since that time a great change has taken place, and a much greater interest in the subject has been aroused in all parts of Canada.

The discussion on Dominion registration at the last meeting of the Canadian Medical Association was the great event of the gathering. We cannot repeat too often that we are greatly indebted to Dr. Thos. Roddick, M.P., of Montreal, for the grand work he has done in connection with this matter. He came to Toronto to meet Dr. Jas. Thorburn, of this city, and Dr. Williams, of Ingersoll, at the time before referred to, and, we understand, the bill that will be brought before the Dominion Parliament at its next session has been finally drafted.

It provides for the establishment of a Canadian Medical Council whose certificate will enable the holder to practise in any province of Canada on payment of the provincial fee. This Council will consist of twenty-four members—three from each province—and will fix the standard of the examinations. It is likely that the Act will cover all physicians who have been in practice ten years at the time of the passing of the bill. Dr. Roddick, in an interview with a representative of the *Toronto World*, said that such legislation was urgently needed because a number of fines had been imposed on medical men for crossing provincial borders to practise. In one case an Ontario surgeon who had crossed the Ottawa River to attend a woman in confinement when she could get no other aid, and had saved her life, was fined fifty dollars.

THE MILITIA MEDICAL SERVICE.

One of the most pleasing evidences of the growth of Imperial sentiment in Canada, and of a consciousness, at least, faintly stirring in the public mind, of the duties of the Canadian community to the Motherland and Sister-lands of the Empire, is the increased interest taken in the militia. And in no direction is more marked advance being made than in the medical service. Among those of us who have watched and waited for the signs of dawn in the Militia Department, there is a general feeling of satisfaction at the fact that the Honourable, the Minister of Militia and Defence is a medical practitioner of extended experience ;

and there is abroad also a feeling that the interests of the medical service will be safe in his hands. The General Officer Commanding, too, in addition to the energy and tact with which he has proceeded to arouse, from without, public interest in the force, and to remedy, from within, defects and anachronisms of organization and administration, has shown decided appreciation of the uses and needs of the medical service, and has inspired us with great hopes for its immediate betterment. Betterment is hardly the word in that connection, applied to that which has hitherto been non-existent. For it will scarcely be believed that prior to July of this year of grace, no system of rendering aid to the sick or wounded on service had official existence or recognition at headquarters. Beyond the appointing of a surgeon and an assistant surgeon to units, there was nothing—no issue of supplies, no stretchers, no ambulances, no bearers, no training. To be sure, certain regiments, almost solely in cities, had provided themselves, unofficially and at their own expense, with certain supplies, stretchers, etc., and had trained a few bearers, whose existence was not officially known to the Department. Now, for the first time in the history of Canada, an Army Medical Service is authorized and in process of organization. We learn that hereafter, in addition to the purely regimental side of the service, consisting now of one surgeon, one hospital orderly corporal, and two men per company to be trained as bearers, there is to be formed at once an Army Medical Service, consisting of commissioned medical officers, with rank and file, to man a certain number of bearer companies and field hospitals. These are to form a corps controlled and administered from within, the head being the Director-General at Ottawa, with rank as Colonel, and the other officers ranking with definite seniority within the corps, and posted by the Director-General on the recommendation of the principal medical officers of the various military districts, as the requirements of the service on mobilization may demand. A large amount of stores, supplies, and equipment for the new corps is being procured at once. Medical officers of the A.M.S. will, we understand, rank as combatants, not having the double title (Surgeon-Lieutenant, etc.) which is still to be taken by officers retaining regimental connection merely; and from both classes of officers, military and technical qualification by

examination is now to be exacted, in addition to the professional qualification of which the license to practise is held to be sufficient evidence. Higher military qualifications are demanded of the officers of the A.M.S. than of the regimental surgeon, and from the new corps, of course, would be drawn in time of active service the officers necessary to man such important posts as Brigade Surgeon, M. O. to staff, P.M.O. of Division, on lines of communication, at Headquarters, in Field, Base, and Stationary Hospitals.

It strikes one as remarkable that though, at an initial and transitional stage, such as the service is now placed in, matters of organization, the drafting of regulations, the administration of the new mechanism, are all of the most crucial importance, the authorities should, so far as is known, have taken no steps whatever to consult with the medical officers of the service. They are the men, at least there are among them men, who, from their experience and knowledge of local conditions, should be, before all others, able to advise, and we would respectfully suggest that, before it is too late, a few of them, whose special knowledge and experience are known to the Department, should be called together for consultation. To be sure, the Department did, some months ago, call together, at various district headquarters, a few of the older men to express their opinion upon the scheme as already formulated in somewhat cut-and-dried fashion at headquarters, but so far as one can judge, nothing was gained by it, possibly from the excellence of the regulations as already drafted. But the utmost care will be needed in organizing, or difficulties will arise on all hands. For instance, when a man has to be sent from his own lines to Brigade or Field hospital, at what point does his regimental surgeon's control or interest in him cease? Is the regimental surgeon likely to gracefully let him go, or will he be allowed to follow him with orders and prescriptions into the hospital tent, where a major of the A.M.S. reigns supreme, and bears sole responsibility to the authorities for the case with all its possibilities in the way of subsequent demands upon the country for pensions or indemnities?

IN MEMORY OF DR. ROLPH.—A bust of the late Hon. Dr. John Rolph has recently been placed in the Museum of the

Education Department in this city. Dr. Rolph was one of the most energetic and ablest of the Reformers during the old "Family Compact" days, when this meant a great struggle for years—a struggle as often apparently hopeless as it was thankless. But after many years it brought about responsible government in Canada, to which she owes her present proud position, as at once practically a self-governing nation, and a most loyal part of the great British Empire. Dr. Rolph was also the founder of medical education in Ontario, and an abler or more zealous teacher could not be. His remains lie in Mount Pleasant Cemetery without, as yet, a stone to mark the spot. It has been suggested that it would be a graceful and well-deserved tribute to his memory for his friends still living amongst the old Reformers, and the great number of medical men scattered over Canada and the States, whom he educated, to send in subscriptions for this purpose, so that a modest, yet appropriate, monument might mark the spot where his dust lies. Dr. Geikie, Dean of Trinity Medical College, Toronto, would be glad to receive such contributions, and to see that the desire of those sending them was suitably carried out.

RED CROSS SOCIETY'S WORK.—The spontaneous and hearty outburst of loyalty of the people of Canada found its expression in a desire to do something for the brave volunteers who so cheerfully and readily offered their services in the cause of civil and religious liberty in the Transvaal, and of British supremacy in South Africa. The Canadian Branch of the British National Society for aid to the sick and wounded in war, commonly called the Red Cross Society, having been organized by Dr. Ryerson two years ago, was able without delay to formulate a scheme of unofficial assistance which was promptly and gratefully accepted by the Government and successfully carried out by the Society and its affiliates. Not less than \$25,000 has been raised throughout the Dominion. The money has been expended in the purchase of personal and medical comforts, and a considerable sum has been handed in cash to Colonel Otter for the purchase of supplies in South Africa for the well and sick of the contingent. The fund, known as the National Red Cross Fund, will be kept open as long as the war lasts; 1st, to relieve returning volunteers, who are sick, wounded or out of

employment; 2nd, to forward money to the contingent through the Society's commissioners now at the seat of war; 3rd, if circumstances and funds permit, to contribute something to the relief of the British sick and wounded in the war. Subscriptions may be sent to the Treasurer, National Red Cross Fund, 60 College Street, Toronto.

TORONTO POST-GRADUATE MEDICAL SOCIETY.—A meeting of the above society for reorganization was held at Toronto General Hospital, October 18th, when the following officers were elected for the ensuing year: Honorary President, H. B. Anderson, M.D., L.R.C.P., M.R.C.S. (Eng.); Honorary Vice-President, H. A. Bruce, F.R.C.S. (Eng.); President, A. D. Stuart, M.B., T.G.H. staff; Vice-President, Colin Campbell, M.D., T.G.H. staff; Secretary, Horace Wrinch, M.D., St. Michael's Hospital. This society was organized in 1898 at the instance of the late Dr. J. E. Graham, the membership being made up of the house surgeons of the various city hospitals and fifth-year men doing hospital work. Meetings are held on the first and third Monday of each month at the various institutions, the evening being given up to the reading and discussion of one paper and the presentation of interesting cases. The first regular meeting was held November 1st at the residence of the Honorary President, on Wellesley Street. Dr. Horace Wrinch presented the paper of the evening, a very thorough study of a case of interstitial emphysema complicating pulmonary tuberculosis in the infant. Sections and photographs were exhibited and a very lively discussion was provoked. Dr. Colin Campbell presented a recent specimen of a case of ectopic gestation with suppurative of the sac. The Secretary was authorized to convey to the family of the late Honorary President, Dr. J. E. Graham, a message of sympathy with them in their bereavement and an expression of the loss felt by the Society at his death.

COMMENDABLE ACTION.—Messrs. Parke, Davis & Co., of Walkerville, gave antiseptic preparations to the value of \$100 to the Canadian contingent. The firm also placed the names of two of their staff, who have gone with the contingent, on the salary roll at half pay during the period of their enlistment. This kindly action will be greatly appreciated by all patriotic Britons and accentuates the Anglo-American *entente cordiale*.

PUNISHED FOR SUBSTITUTION.—A decision of considerable importance was made by Judge Kohlsaatz in the United States Circuit Court yesterday. In a bill for an injunction Fairchild Brothers & Foster, of New York, had charged Edward Otto, a Chicago druggist, with substituting a spurious and inferior preparation for "Fairchild's Essence of Pepsine" in several cases where the latter was expressly called for in physicians' prescriptions. The case was hotly contested and hundreds of pages of depositions were taken in New York and Chicago. Judge Kohlsaatz's decree sustains the charges made, perpetually enjoins Otto from ever repeating the offence, and taxes him with the costs, amounting to about \$500. This is said to be the first contested case in the United States in which the principle of protection of trade-marks and trade names was extended so as to apply to what is technically known in the drug business as "substitution." Judge Kohlsaatz's decision will probably protect manufacturing chemists, physicians and the general public, all of whom have in the past suffered from the fraudulent practices of a certain class of druggists.—*Chicago Times-Herald*, October 13th, 1899. [We extend our congratulations to Fairchild Brothers & Foster in their endeavor to crush the druggists' rankest sin—substitution.]

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about \$180, will be made on July 14th, 1900, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in Medicine, but can not have been published, and must be received by the Secretary of the College on or before May 1st, 1900. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied with a sealed envelope having on its outside the motto of the paper, and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1899 has been awarded to Dr. Robert L. Randolph, of Baltimore, Md., for his essay, entitled "The Regeneration of the Crystalline Lens—An Experimental Study."

THOMAS R. NEILSON, M.D.,

Secretary.

Obituary.

GEORGE LOGAN, M.D.

Dr. George Logan, of Ottawa, died after a prolonged illness from cancer, November 17th, aged 69. He was born in Scotland, but came to Canada when a child, with his parents who settled in the county of Oxford. He received his preliminary education in Woodstock, and his medical education in Columbus, Ohio. Shortly after graduating, in 1860, he commenced practice in Bowmanville, where he remained about two years. He went to Ottawa in 1863 and practised in that city until the time of his last illness. He was a kindly, able and cultured man, loved and respected by all who knew him, for many years member of the Ontario Medical Council and one of its past-presidents, and generally recognized as the most prominent homeopathic physician in Canada.

SAMUEL DAVID HAGEL, M.B.

It was a surprise to the friends of Dr. S. D. Hagel to hear of his death, which occurred on the morning of November 27th, as few had heard of his illness. He was not in good health for some time, but was able to do his ordinary work until the evening of November 25th, when he first showed symptoms of pneumonia. He sank very rapidly and died on the morning of November 27th, aged 57. Dr. Hagel graduated from Toronto University in 1873, being a double silver medallist, and at once commenced practice in Toronto where he remained until the time of his death.

Personals.

Dr. R. J. Wilson, of Bloor Street, has been appointed an associate coroner for the city of Toronto and county of York.

Dr. Jas. Third, of Kingston, paid a visit to Baltimore in the latter part of October.

Dr. Hibbert Winslow Hill (Tor. '93), of Baltimore, was married to Miss Goldstone, November 14th, St. Stephen's Church, Toronto.

Dr. J. M. McCallum takes the place of the late Dr. Graham on the University Senate in accordance with the established precedent.

Book Reviews.

Warner's Pocket Medical Dictionary of To-day. Comprising Pronunciation and Definition of 10,000 essential words and terms used in medicine and associated sciences, with tables of arteries and nerve muscles, arranged for convenient reference. By WILLIAM R. WARNER. Philadelphia: Wm. R. Warner & Co. Price, 75 cents.

This work is to be specially recommended to the student for class-room service, and to the profession at large, when larger dictionaries are impracticable.

Diseases of Children. A Manual for Students and Practitioners. By GEORGE M. TUTTLE, M.D., Attending Physician to St. Luke's Hospital, Martha Parsons' Hospital for Children, and Bethesda Asylum, St. Louis. Philadelphia: Lea Brothers & Co.

This work is one of a series of pocket editions, published by Lea & Co. It contains a vast amount of information in, of course, very condensed form. At the same time desire for brevity has not prevented the authors making a clear presentation of the subject. A short space is devoted to every disease, one would think, to be met with in childhood. The book can not fail to secure appreciation from the overworked student and the busy practitioner.

A Text-Book of the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of the Practice of Medicine and Clinical Medicine in the Medico-Chirurgical College, Philadelphia; Attending Physician to the Medico-Chirurgical and Samaritan Hospitals, Philadelphia, etc. A magnificent octavo volume of 1,287 pages. Illustrated with four colored plates and numerous engravings. Third edition. W. B. Saunders, Philadelphia, publisher. J. A. Carveth & Co., Toronto, Canadian agents. Prices: Cloth, \$5.50 net; sheep or half morocco, \$6.50 net.

We have already expressed a decided opinion of the excellence of a former edition of this work in the following words: "It is an excellent book, thoroughly up-to-date, and a reliable guide to the general practitioner." This third edition contains much new matter and many thorough revisions, and is second to none as a good, safe, and new manual, suitable alike for both student and general practitioner.

The American Year-Book of Medicine and Surgery, collected and arranged with Critical Editorial Comments. By SAMUEL W. ABBOTT, M.D., and twenty-seven other Prominent Physicians and Surgeons, under the general editorial charge of GEORGE M. GOULD, M.D. Illustrated. W. B. Saunders, Philadelphia, publisher. J. A. Carveth & Co., Toronto, Canadian agents. Price, \$6.50, cloth.

We regret exceedingly that by an unfortunate accident we have not long before this published a review of this admirable book. We have during three previous years had much pleasure in speaking in the highest terms of this work. If there is any difference between the book this year and that of preceding years, we think the volume for 1899 is the best which Mr. Saunders has thus far published. The book is exactly what it claims to be, *i.e.*, a yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators.

Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing and Medical Latin—A Manual for Students and Practitioners. By WM. SCHLEIF, M.D., Instructor in Pharmacy in the University of Pennsylvania. Lea's Series of Pocket Text-Books. Lea Brothers & Co., Philadelphia and New York.

This volume is another of this valuable series of pocket text-books issued by the well-known Lea firm. It affords a condensed yet comprehensive text-book and reference on materia medica, therapeutics and associated subjects. In addition to discussing the remedial agents in all their bearings, prescription writing, medical Latin, pharmacy and anesthesia are dealt with. Tables of doses, poisons and antidotes and incompatibilities, together with a therapeutic index of diseases and remedies, and a general index conclude a most serviceable text-book.

The American Pocket Medical Dictionary. By W. A. NEWMAN DORLAND, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine, etc. Philadelphia: W. B. Saunders. Toronto: J. A. Carveth. \$1.25.

This is a small volume, neatly bound in red morocco, containing the pronunciation and definition of some 26,000 of the terms used in medicine and the kindred sciences, as well as over sixty extensive tables, which are very convenient for purposes of reference, both to the student and busy practitioner. It does

not take the place of the larger dictionaries, but simply fills the place for which the author intended it. The first edition was exhausted in six months, therefore the author was induced to issue the second, which he has successfully endeavored to bring up-to-date by inserting the more important new words in medical literature. At the end there is a dose table which contains the new as well as the older remedies.

Physiology—A Manual for Students and Practitioners. By HOWARD D. COLLINS, M.D., Assistant to the Attending Surgeon of the Roosevelt Hospital; Assistant Demonstrator of Anatomy, College of Physicians and Surgeons (Columbia University), New York; and WM. H. ROCKWELL, jun., M.D., Assistant Demonstrator of Anatomy, College of Physicians and Surgeons (Columbia University), New York; Member of the Association of American Anatomists. Edited by BERN B. GALLANDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons (Columbia University), New York; Visiting Surgeon Bellevue Hospital, New York. Lea Brothers & Co., Philadelphia and New York.

This number of Lea's Series of Pocket Text-Books is presented to the student in the hope that it may enable him to better understand the larger works on physiology and for the purpose of providing him with more accurate information than he can get from the various quiz-compends. No claim is made to original research. The larger works on the subject have been freely drawn from, and the matter abstracted put in very lucid language. Histology receives a good deal of attention. The illustrations are good, and will without doubt be thoroughly appreciated by the student, enabling him to more fully grasp the subject.

Practice of Medicine. By GEORGE E. MALSARY, M.D., Assistant to the Chair of Theory and Practice of Medicine, Medical College of Ohio, Cincinnati; Assistant to the Lectureship of Clinical Medicine, Good Samaritan Hospital, Cincinnati. Edited by BERN B. GALLANDET, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons (Columbia University), New York; Visiting Surgeon Bellevue Hospital, New York. Lea Brothers & Co., Philadelphia and New York.

This is one of Lea's Series of Pocket Text-Books in which the author endeavors to epitomize each subject for the convenience of the practitioner and student, in the hope that he may find what he wants more readily than in the more exhaustive works

in medicine. Etiology, symptomatology, diagnosis and treatment are dealt with in a concise manner but with sufficient fullness to enable the student to grasp the salient points. No attempt is made to deal with pathology, nor are diseases of the skin and nervous system considered. Many subjects are illustrated by engravings, which add to the value of the work. While the book is a good one of its kind and has its uses, the growing tendency on the part of the student to rely upon brief epitomes for his work, to the neglect of the more exhaustive volumes, should not be encouraged. This is not the author's intention. His desire is to place before the physician and student the recent progress in medicine in concise form. This he has ably accomplished.

A Text-Book of Materia Medica, Therapeutics and Pharmacology. By GEORGE FRANK BUTLER, Ph.G., M.D., Professor of Materia Medica and Clinical Medicine in the College of Physicians and Surgeons, University of Illinois; Professor of General Medicine and Diseases of the Digestive System, Chicago Clinical School; Attending Physician to Cook County Hospital. Third edition, revised. Philadelphia: W. B. Saunders, 925 Walnut Street. 1899.

The author of this volume adopts an arrangement of the remedies which is an attempt at being both practical and scientific. The drugs are grouped according to their principal pharmacological affinities. Thus the materia medica, pharmacology and therapeutics of carbolic acid, creosote, guaiacol, iodoform, eucalyptus, boric acid, etc., remedies which are mainly used as antiseptics, are described in one division of the work. The arrangement of these drugs, as well as of those under many of the other therapeutic classes, such as emetics, cardiac stimulants, cardiac sedatives, anthelmintics, purgatives, etc., is an excellent method of presenting the subject. However, there are many drugs which are not so readily classified. For the purpose of overcoming this difficulty the author discards several of the old therapeutic classes and introduces new ones, such as aromatics, motor excitants, motor depressants, etc. We do not think that this procedure has at all improved matters. In the group called motor depressants we find physostigma, conium, amyl nitrite and bromides, drugs which are not pharmacologically closely allied. In addition to the classification there are many other notable features. The chapters on pharmacy form a valuable part of the work. The book contains a large number of diagrams, illustrating the mode of action of various drugs. We can warmly recommend the volume to both students and practitioners.

The Sexual Organs—Their Use and Abuse. By J. E. HELLER HETT, Berlin.

Dr. Hett has undertaken to write a popular treatise on this important subject. The author has very pronounced ideas on the subject, and he has presented them in a very concise form. The author states that his reason for writing the volume is to enlighten the public on matters that he considers of vital importance to themselves. Many of the most striking passages in this work are well worth careful thought, and if men would follow the precepts laid down therein, they would, undoubtedly, be better themselves, and be of more use to their fellow-beings.

Bartholow's Materia Medica and Therapeutics.

Appleton & Company have just issued the tenth edition of this work, long recognized as a standard hand-book, whether as a text-book for the student or a hand-book of reference for the practitioner. It would seem that as the work is based on the U.S.P., and the next edition of the latter is due in 1900, it might have been well to postpone this edition for a few months, that the host of new remedies might have been weeded out by the U.S.P. first, and those accepted by it placed in this work. Of course, many of them do appear here. The articles on therapeutic agents other than drugs, such as diet, baths, massage, electricity, etc., are such as almost to do away with the need of special texts on the subjects named. The work fully retains its encyclopedic character and thoroughly sound and conservative views, while neglecting no genuine advance in the art of healing by medical means.

A Text-Book of Embryology for Students of Medicine. By JOHN CLEMENT HEISLER, M.D., Professor of Anatomy to the Medico-Chirurgical College, Philadelphia. With 190 illustrations, 26 of them in colors. Publisher: W. B. Saunders, 925 Walnut Street, Philadelphia. Canadian agents: J. A. Carveth & Co., Toronto. Price, \$2.50 net.

The aim of the author of this excellent text-book was to make it full enough to be intelligible, without that minuteness of detail which characterizes the larger treatises which contain too much for ordinary medical students. He has also endeavored to present a connected story of human development, but also to make each chapter as nearly as possible complete in itself for the sake of convenience of reference. We think the author has well carried out all his aims. The illustrations are remarkably good, and will materially assist students in their study of what is generally considered a complete subject.

Saunders' Question Compend. Essentials of Anatomy, including the anatomy of the viscera, arranged in the form of questions and answers, prepared especially for students of medicine. By CHARLES B. NANCREDÉ, M.D., Professor of Surgery and of Clinical Surgery to the University of Michigan, etc. Sixth edition, thoroughly revised by FRED. J. BROCKWAY, M.D., Assistant Demonstrator of Anatomy, Columbia University, New York.

Essentials of Medical Chemistry, Organic and Inorganic, containing also Questions of Medical Physics, Chemical Philosophy, Analytical Processes, Toxicology, etc. By LAWRENCE WOLFF, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. Fifth edition, thoroughly revised by SMITH ELY JOLLIFFE, M.D., Ph.D., Professor of Pharmacology, College of Pharmacy of the City of New York, etc.

These two small manuals, or "question compends," are published by W. B. Saunders, of Philadelphia, for the use of students. Their popularity among the students of the United States and Canada may be inferred from the fact that over 175,000 copies of these publications have been sold since the issue of the first volume. The price of each volume is \$1.00. The Canadian agents are J. A. Carveth & Co., of Toronto.

Sajous' Annual and Analytical Cyclopedia of Practical Medicine. Subscription entire series only. Six volumes; one every six months. Cloth, \$5.00; half Russia, \$6.00. Monthly supplements sent free during the three years. Philadelphia: The F. A. Davis Company. Fourth volume, Infants, Diarrheal Diseases of—Mercury.

The fourth volume in this series maintains the very high standard of its predecessors. It embraces Infants, Diarrheal Diseases of to Mercury, and in this wide range the subjects are most ably handled by men expert in their several branches. "The Annual" has lost one of its most valued editors, Professor Geo. H. Rohé, who has been connected with the editorial staff since 1891. Dr. Rohé's contribution to this volume, the article on insanity, is typical of the man. He was an erudite scholar, and a specialist in several branches—the skin, mental diseases, sanitary science, and general medicine. The present article is characteristic in its thoroughness, and remarkable for its terseness. The opening sentence—a definition—insanity means disordered mental function—is undoubtedly concise, and the context is equally clear. He had no time to waste on superfluities, but got to the point at once.

The article contributed to this volume by Dr. Alexander McPhedran, on the diseases of the liver and gall-bladder, is

handled in a very scientific manner. The writer has had long experience in this particular variety of disease, and is an authority on all forms of hepatic and splenic derangements.

Malarial fevers are of such importance, and the isolation of the exciting cause has occupied so much professional attention during recent years, that the very elaborate article by Drs. J. C. Wilson, and T. G. Ashton, of Philadelphia, is most appropriate. The parasites are illustrated, through their cycle of development, in beautifully colored plates. The three varieties which are responsible for the different forms of the disease, are each shown, and their characteristics differentiated. The treatments, as in all these articles, are treated chronologically.

These volumes are unique in this respect, that the different articles present their subject matter in the same manner, *i.e.*, chronologically. This feature is one that undoubtedly impresses itself on the reader, and enables him to picture to himself the position that the different diseases occupied in relation to pathology and treatment at the end of each year. The series should meet with an exceedingly wide sale.

The Hygiene of Transmissible Diseases: Their Causation, Modes of Dissemination, and Methods of Prevention. By A. C. ABBOTT, M.D., Professor of Hygiene and Bacteriology, and Director of the Laboratory of Hygiene, University of Pennsylvania. Philadelphia: W. B. Saunders. 1899. Pp. 311. Cloth, \$2.50.

This book is well printed; clear, distinct type, on good, heavy paper. It is illustrated with some sixty figures and charts. The introductory chapter of eight pages states the reasons why the progressive practitioner should be conversant with hygiene, and adduces statistics of life-saving due to preventive measures: death rates from small-pox reduced by vaccination from 3 to 0.03 per 1000; scurvy and typhus banished; deaths from typhoid reduced from 2.91 to 0.1 per 1000 in Munich by sewage and water supply, and 59 and 60 per cent. in Lawrence, Mass., and in Chicago, respectively, by improved water supply. The next thirty pages, dealing with the "Causation of Disease in General," is divided between the consideration of Predisposing Causes, under which we have the influence of age, sex, race, occupation, density of population, heredity and season; and Exciting Causes, subdivided into chemical, physical and mechanical, animal parasites, bacteria.

It will be of interest to life insurance companies to know that women have a longer expectation of life than men, and Jews than other races. We have many of the time-honored statistics, but amongst new ones we note a striking chart showing the

evil effects of overcrowding—great preponderance of disease in one and two-room houses as compared respectively with three, four and five-room ones—this is especially noticeable in zymotic and lung diseases; but the author points out that bad feeding and other unsanitary conditions are apt to co-exist with the overcrowding.

A consideration of the various transmissible diseases individually occupies the next 150 pages; the diseases named amount up to twenty-nine, twenty-eight of which throw out malarial fever, which is, we suppose, inserted in this connection because of its importance and interest, and is brought technically in because of its “transmissibility” through the agency of the mosquito.

In regard to actinomycosis, some of our health authorities will, in view of the measures they have thought desirable, be rather staggered by the statement that “There is no positive evidence that the disease is transmitted from animal to animal, or from animal to man, or *vice versa*.” It is added, however, that it is of course safer to regard subjects of the disease as dangerous, and to isolate them.” The author deems it “probable that both man and animals receive the virus from the same external source . . . a parasite upon certain cereals.”

The author minimizes, too far, we think, the dangers from defective plumbing and drainage; the remarks to which we refer may be found on page 115. We have not time to debate the theoretical statement that “it is difficult to conceive the way,” but we do know, as a matter of practical observation, of case after case when both diphtheria and typhoid fever have been prevalent and persistent during the existence of flagrant defects, by which sewer air escaped into houses, and where they have ceased to exist after these defects have been remedied. Mr. Sedgwick Saunders thought that he saw some sore throats and typhoid from escape of gases from sewers. The same thing was noted in commenting upon the difference in the prevalence of two contiguous boroughs in London, alike in all respects except the escape of sewer gas from the manholes and culverts of the more modern but less fortunate of the two. We have spoken emphatically and at length because we think it dangerous for a highly-gifted author to minimize the evils of sewer gas.

We commend to the reader the author's views of the care that should be exercised in disposing of pneumonic sputa.

We think it is confusing to use the word “vaccination” except in connection with the transmission of the vaccine disease. In future editions we hope the doctor will make the printer spell “preventable” as the doctor himself spells it in his preface. We mention this because this good hygienic word is

in danger of being lost by the very prevalent desire of the printer to weaken the "able" into "ible."

We turn eagerly, of course, to find "the latest" about germicides and their practical application. We have here a very full article on formaldehyde, illustrated by figures of various apparatus. We quote certain summarized statements. "Its powers of penetration cannot be relied upon. . . . It is highly to be recommended as a superficial disinfectant. . . . The methods that have found *most* favor are those in which the nascent gas is liberated from its watery solution and from its solid polymerized products."

The book contains a useful and finely-illustrated chapter on Animal Parasites. The work is a useful and pleasing edition to our hygienic literature.

Minor Surgery and Bandaging. By HENRY R. WHARTON, M.D., Demonstrator of Surgery in the University of Pennsylvania, Surgeon to the Presbyterian Hospital and the Children's Hospital, Consulting Surgeon to the Presbyterian Orphanage and the Bryn Mawr Hospital, Fellow of the American Surgical Association. Fourth edition, thoroughly revised and enlarged. With 502 illustrations. Lea Brothers & Co., Philadelphia and New York. 1899.

This book of nearly 600 pages has been very popular with students since the first edition appeared in 1891. This fourth edition has much that is new in it, set forth in a clear and lucid style, and is thoroughly up-to-date. Asepsis, antiseptis, surgical bacteriology, and operations upon the cadaver are short, concise, and to the point. An attempt has been made to crowd a great deal into a small space, and thus some parts suffer by being too meagre. Taken altogether the book is one that can safely be recommended to students.

Physician's Visiting List. Blakiston's Sons & Co., Philadelphia.

The visiting list for the coming year appears in familiar form. It in no way differs from the lists furnished by the same firm for so many years. Nothing could be more convenient or better adapted to the purpose it is meant to serve. As in previous editions the opening pages contain Calendar, Metric System, Dosage tables and other useful information. The books are arranged for 25, 50, 75 and 100 patients per week. Price, \$1.00 to \$2.25.

Selections.

The Indirect Treatment of Hepatic Cirrhosis.

Cardarelli (*La Riforma Medica*) deals chiefly with the treatment of milk diet, of which he speaks highly. In the cases in which it does good, the urine increases in quantity, the urea increases, and the uroerythrin disappears. These good effects may not be seen all at once; they may be delayed, especially where there is much abdominal tension. Small quantities (half a litre or even less) should be given at first. If milk cannot be borne, large doses (40 to 50 grammes) of lactose may be given in weak broth. To test the power of absorption, the author recommends an enema containing five to six grammes of salicylate of soda, which may be looked for in the subsequent urine. The most reliable indication for paracentesis abdominis where there is ascites, is the quantity and quality of the urine and the presence of edema of the lower extremities. In performing paracentesis, the author prefers the gradual method of extraction by Southey's tubes.—*Brit. Med. Jour.*

Sterilization of the Skin.

Senger (*Centralblatt für Chirurgie*), investigating the value of alcohol as a disinfectant for the hands, finds that absolute alcohol will not destroy staphylococcus aureus in twenty minutes. The disinfecting power of this agent increases, however, as this drug is diluted down to 50 or 40 per cent. After this the germicidal effect of the drug rapidly disappears. As a result of his experience, he states that a 50 or 40 per cent. solution of alcohol is a sure bactericide for the staphylococcus. If a mixture of alcohol and carbolic acid is employed the result is less satisfactory than when alcohol alone is used, since a chemical combination results, with the formation of a kind of ether. A mixture of 5 per cent. carbolic solution with 10, 20 or 30 per cent. absolutely pure alcohol is entirely inefficacious.

For three years Senger has employed a method of disinfection of the skin based upon his chemical studies. Two agents were employed which had the power of destroying the cocci, and which entered into a chemical combination which in itself is bactericidal. He employs first a 2 and 5 per cent. warm solution of hydrochloric acid for two minutes, then a $\frac{1}{2}$ to 2 per cent. warm solution of potassium permanganate for one minute. The resultant brown discoloration of the skin may be removed in a few seconds by sulphurous acid. The action of the hydrochloric acid on the potassium permanganate causes

among other things the development of free chlorine. Oxygen and sulphuric acid are also formed.

According to Kronig and Paul, a 1 per cent. solution of hydrochloric acid with 1 per cent. solution of potassium permanganate acts far more powerfully upon anthrax bacilli than a 5 per cent. solution of sublimate. After bacteriological investigation the author has proven that a 1 per cent. solution of hydrochloric acid at about the body temperature is an extremely powerful bactericide. Sulphurous acid and potassium permanganate are weaker. By means of this method he has been enabled to procure sterility of the hands in 78 per cent. of the cases. He commends the method as the safest and the quickest for thoroughly disinfecting the hands and the skin when infected with decomposed substances.—*Therapeutic Gazette*.

A Study of Anger.

In a recent number of the *Psychological Review* Mr. G. Stanley Hall gives an interesting account of what we may call the physiology of anger. Anger may be defined as the outward and visible manifestation of emotions which have escaped control and the measure of individual civilization is precisely the degree to which command over these particular manifestations have been acquired. The "gentleman" is conventionally one whose nervous system has been so disciplined as never to elude control in this direction. In a state of nature no control of the kind is practised except in deference to motives of a physical order, but the further we advance on the path of civilization the more the ability to command the emotions is expected and enforced. If this be so it is difficult to avoid the conviction that we have not advanced very far on that road. Each individual has his weak side; in other words, every one is more vulnerable on one point than on certain others. Some people are peculiarly susceptible to ridicule, while others are more disposed to jealousy, a sense of injustice or disappointment. The manifestations of the state of anger vary according to the temperament of the individual, but in all there is grave circulatory disturbance, occasionally so marked as of itself to determine a fatal issue. Those in whom the heart is strong and prompt to react, usually flush at the approach of anger, but the less sanguine, and those whose hearts respond less readily to stimulation, or are unequal to the strain thrown upon them, become pale, though the pallor may be but momentary. In both the force of the heart beat is markedly enhanced, the heightened blood pressure accelerates the urinary and salivary secretions, while the greater demand for oxygen causes active working of the respiratory muscles. The extraordinary strain thus thrown on the nervous system is apt for the time

being to disorganize the muscular apparatus, leading to tremors and unsteadiness of gait, which, however, may be promptly recovered from. Giddiness, nausea, and other functional disturbances are directly attributable to the sudden change of blood pressure. The sounds emitted by persons under the empire of anger vary, passing from the monotonous cry of infancy, through the animal-like noises of childhood, to the threats and oaths of adult life. In exceptional cases there is a kind of inhibitory paralysis of the sound-producing apparatus, but in general the omission of a noise of some sort seems to be the necessary accompaniment of this state of pent-up energy. The state which we call irritability results from impairment of the inhibitory powers, and is often due to illhealth or to fatigue and loss of sleep. The irritability of convalescence is a sign that the lower reflexes are restored before the higher, for the "department of inhibition" is the controlling power of the organism and the seat of the highest manifestations of the ego,—*Medical Press and Circular*.

The Nurse as a Specialist.

We have from time to time wondered what is to happen to the nurses in the present rapid development and differentiation of medical practice. We accept the fact of specialism among physicians with varying degrees of equanimity, depending upon our education and prejudices, but with a natural conservatism we are inclined to protest against a like tendency among nurses. Nevertheless the inevitable has happened, and nurses are already specialists. Go to a directory and one is met with the query as to whether one wishes a surgical, or an obstetric, or a general medical nurse, or one experienced in caring for the insane. Each of these varieties is recognized, and no doubt many more will spring into being as the demand arises. The situation is certainly an interesting one, and one to which attention must sooner or later be directed as regards the prescribed course of training. It is evident that certain hospitals offer opportunities which others do not, and that a special training may be had in one which would be quite impossible in another. The result is that nurses skilled in the care of certain types of disease are being turned out in greater numbers year by year, who are likely to find employment only in one branch of medical practice.

This means specialism for nurses, a fact which we should clearly recognize, and not too deeply regret, since it is unavoidable. No doubt this question will finally settle itself, as do many others over which we vainly lament. In the meantime it behooves us to readjust our training schools to meet the coming requirements.—*Boston Med. and Surg. Journal*.

Medical Experience Is Built Gradually.

Every doctor who sits down and reviews his past life will see that the sum of his knowledge has been a gradual growth, that he has added to it little by little through study and investigation, sifted and weighed it by experience and organized it by use. Something else has grown side by side with knowledge, built gradually by similar processes, and of no less value than knowledge. That something is character.

Character is a spiritual force which enables man to use his knowledge and skill to the highest advantage, the noblest end. All physicians and surgeons who have attained world-wide and lasting fame have been men of lofty character, men whom we instinctively trust and respect, men who inspire us with hope and courage, men whose strong souls radiate an atmosphere of cheer. Talent and ability may and do exist apart from character, but they resemble an unharnessed, ill-guided, wanton force, which is quite as apt to smite and destroy as to aid and benefit.

Character is inherited in the form of moral instincts and acquired through precept and practice. Character may be built up and strengthened by right thinking and right doing, or it may be frittered away by sophistry and self-indulgence. We cannot be too exacting in our moral standards or too rigid in conforming to them. The man who is not building character is wrecking it; yet it is the only real, inseparable wealth which he possesses, and which blesses and enriches his posterity with natural gifts which cannot corrupt and lead astray, as material wealth sometimes does.—*Indian Medical Record*.

A Case of Triple Personality.

The Pathological Institute of the New York State Hospital for the Insane has recently reported a case of great scientific interest with admirable practical results, occurring in the department of the institute devoted to psychology and psychopathology. The case is a remarkable one of amnesia, the patient being a clergyman, about twenty-six years old, who fell out of a wagon, and, striking upon his head, became unconscious. When he recovered from the stupor, it was found that he had completely lost his memory, and that his personality was lost with it. His mental condition was that of an infant, and in the course of education to which he was subjected, he developed a new personality, totally different from the old. He next manifested the phenomena of alternating personality, and awaking in possession of his primitive personality, and *vice versa*. Neither personality was at all conscious of the other. The patient thus had two consciousnesses, which he possessed

at different times, but between which there was absolutely no communication. The problem was how to unify the double consciousness. This was attempted by preventing him from lapsing into profound slumber, keeping him in a condition between sleeping and waking, and the result proved successful. As a consequence he developed a third personality, which was conscious of the other two personalities, and this finally filled every gap in his memory. Dr. Van Giesen, the director of the Pathological Institute, naturally regards the case with great satisfaction, and expresses the opinion that it shows a decided advance in the domain of psychology.—*Boston Medical and Surgical Journal*.

Ichthyol in Phthisis.

Wertheimer (*Münch. medicinische Wochenschrift*, June 13th, 1899) speaks highly of ichthyol internally in phthisis. The writer has administered it to most of his patients for two years. He prescribes it mixed with equal parts of water, giving one to two drops of the mixture after meals, in a tablespoonful of water, and gradually increasing the dose until ten drops thrice daily are taken. Larger doses have no special advantage. Distress in the stomach is an indication that the dose is too large. Wertheimer claims that, after a week or two of this treatment, the cough and expectoration diminish, the temperature falls to normal, the appetite improves, and that there is distinct gain in flesh.—*University Medical Magazine*.

Peritoneal Affection Resembling Tuberculosis Caused by the Eggs of Tapeworms.

Helbing (*Berl. klin. Woch.*) in the Free Association of Berlin Surgeons, demonstrated specimens from a piece of omentum which Israel had removed from a patient during an operation for perityphlitis. For several reasons the presence of tuberculous disease had been suspected. Sections of the omentum showed that in the fatty tissue there was an interstitial growth of granulation tissue containing many giant cells. Instead of tubercle bacilli globular bodies with radially striated capsule were demonstrated by carbo-fuchsin staining. These could be recognized as the ova of tapeworms, which had doubtless gained admission into the peritoneal cavity through the perforated vermiform appendix. Miura, of Tokio, has given a short account of an analogous case.—*Brit. Med. Jour*

Miscellaneous.

THE STORY OF A SPA.

Superstition, intuition,
Universal imbibition,
Disappointment and vexation ;
Then again sound observation,
Clinical empiricism,
Diet rules and regulation.
Theories of chemist, analytical ;
Puffs of cure-all, hypocritical ;
Grateful touts of "perfect cures" ;
Wealthy, pampered epicures !
Science scoffing, Fashion smiling ;
Yet the wells are still beguiling
Men and women for their healing—
Pace reason—proved by feeling !
"Powers of nature occult still" ;
Atoms, cosmic force, or veil ?
So the cycle we fulfil,
And the fruit of erudition
Mystery—like superstition !

—*Quarterly Medical Journal.*

Sulphate of Duboisin in Paralysis Agitans.

X. Francotte, in the *Journal de Neurologie* for May, 1899, gives the result of his treatment of twelve cases of paralysis agitans with duboisin. In nine of the cases there was a marked amelioration in the symptoms, though, of course, there was no case which could be considered cured. The drug seemed to exercise an especially favorable influence over the rigidity, and in the cases which it helped the tremor was much decreased. The drug was used in the form of granules which contained half a milligramme each ; these were given two, three or six daily, according to the physiological effects. The drug was held at its full dose for a long period of time. Marked tolerance for the drug was not established, and its favorable influence seemed to continue nearly as long as the administration. Two of the cases treated were not improved, and these showed marked intolerance of the drug from the beginning.

Cock-Sureness in Prognosis.

Dr. Boardman Reed says: "Floating around among the daily papers we have observed a story concerning an old citizen of a Western town, who, twenty-eight years ago, was said to have been given up to die by eight different physicians on account of advanced lung trouble. He has lived to see five of the eight erroneous prognosticators die before him, and, as the story goes, expects to bury the other three. This yarn may or may not be true—probably not ; but cases do frequently

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